



THE THIRD

# ANNUAL REPORT

ON THE

Health of the County Borough of Wigan,

FOR THE YEAR ENDING DECEMBER 31st, 1898,

BY

WILLIAM BERRY,

F.R.C.S.I., D.P.H., F.P. & S. Glasgow,


MEDICAL OFFICER OF HEALTH AND MEDICAL SUPERIN-  
TENDENT OF THE BOROUGH SANATORIUM FOR  
INFECTIOUS DISEASES.



WIGAN :

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# SANITARY & SEWERAGE COMMITTEE.

---

From November, 1898, to November, 1899.

CHAIRMAN :

ALDERMAN J. PHILLIPS, J.P.

VICE-CHAIRMAN :

HIS WORSHIP THE MAYOR (MR. COUNCILLOR J. T. GEE).

COMMITTEE :

ALDERMAN R. RICHARDS, EX-MAYOR.

COUNCILLOR THOMAS ASHTON.

„ RICHARD BANNISTER.

„ JOHN BOARDMAN.

„ LEVI BOOTH.

„ HENRY FARRIMOND.

„ JAMES HIGHAM.

„ JAMES HOWARD.

„ JOHN McQUAID.

„ ELIJAH MOLYNEUX.

„ JAMES O'DONAHUE.

„ FERDINAND REES, M.D.

„ JAMES WILSON.

„ MATTHEW BENSON, M.D.

# MEDICAL OFFICER OF HEALTH'S DEPARTMENT.



Medical Officer of Health and Medical Superintendent of Sanatorium :

WILLIAM BERRY, F.R.C.S.I., D.P.H., F.P.S., Glasgow.

Fellow of the Incorporated Society of Medical Officers of Health.

Fellow Royal Inst., Public Health and Mem. San. Inst.

Chief Sanitary Inspector :

JOHN SUMNER, Certif. San. Inst. and Assoc. San. Inst.

Assistant Sanitary Inspectors :

JAMES ALLEN SHORT, Certif. San. Inst. and Asso. San. Inst.

CHARLES H. FRANCE, Certif. San. Inst.

Hackney Carriage and Shop Hours Act Inspector :

FRED. G. BISHOP.

Clerk :

F R E D . M A R T L E W.

Disinfector :

MARCUS JEPHSON.

Master of Sanatorium :

M r . M I C H A E L M O O R E .



## CORPORATION OF WIGAN.

Officer of Health's Department,

February 7th, 1899.

To the Chairman and Members of the Sanitary Committee.

GENTLEMEN,

I have the honour to present you with my Third Annual Report on the Health of your County Borough for the year 1898.

The death rate for the year is 18·88 per 1,000 of the population, against 20·99 for 1897

Small Pox and Typhus have been absent from our infectious diseases, but we have had an increase in the numbers of Scarlet Fever and of Enteric Fever. Measles was very prevalent at the commencement of the year, and I do think that the system of voluntary notification of the first case has been of benefit in preventing its spread. Whooping Cough has not been so prevalent as in the previous year, and the total deaths from Diarrhœa are considerably lower than in the previous year.

I must again tender you my thanks for your unabated confidence, and for carrying out any sanitary work which I have pointed out as necessary. I must also thank the members of the medical profession practising in Wigan and the neighbourhood for their prompt assistance and co-operation in preventing the spread of infectious disease.

To your Sanitary Inspectors, Mr. Sumner, Mr. Short, and Mr. France, I tender my thanks for the efficient manner in which they have discharged their duties. To Mr. Sumner, your Chief Sanitary Inspector, I am indebted for the statistical work and the keeping of records so necessary to the Sanitary Department.

In my opinion the Sanitary work which has been going on in the town for the last 21 years is now beginning to have an effect in the diminution of our death rate ; the rate for 1898 is the lowest ever recorded in Wigan.

I am, Gentlemen,

Your obedient Servant,

WM. BERRY.

# REPORT.

## STATISTICAL SUMMARY FOR 1898.

*Population* estimated July 1st, 1898..... 61,697.

*Marriages* not ascertainable for County Borough.

„ Annual rate per 1,000 of population, ditto.

*Births* { Males..... 1068 } Total..... 2159  
          { Females..... 1091 }

Annual rate of births per 1,000 of population ... 34.49

Ditto for England and Wales..... 29.4

Illegitimate births, 127, or 5.88 per cent.

Ditto for England and Wales .....

*Deaths* { Males... 605 } Total..... 1182  
          { Females 577 }

Annual rate of mortality..... 18.88

Ditto for England and Wales ..... 17.6

Natural increase of population by births in excess of

deaths ..... 977

Total deaths from zymotic diseases ..... 152

Annual rate of mortality from zymotic diseases ..... 2.45

Ditto for England and Wales..... 2.22

Total deaths from diarrhœa ..... 46

Annual rate of mortality from diarrhœa ..... .73

Infantile rate, deaths per 1,000 births, 1898 ..... 170

Ditto for England and Wales ..... 161

*Acreage.*—With an acreage of 2,188, and a population estimated at 61,697, we have 28.15 persons per acre.

*Population.*—The population estimated at the middle of the year (June 30th, 1898) is 61,697; this may be taken as fairly correct.

*Births.*—The number of births registered during 1898 was 2,159 (males 1,068, females 1,091), the rate per 1,000 of the population being 34.49. The birth-rate compared with 1897 is 2.67 lower. The illegitimate births number 127, or 5.88 per cent., an increase of .50 per cent.

*The Mortality Rate.*—The deaths for 1898 number 1,182 (605 males, and 577 females), the excess of males over females being 28. The rate per 1,000 of population per annum is 18.88; in 1897 20.99, showing a decrease in deaths of 88 and 2.11 in the death-rate.

The death-rate for each quarter is as follows:—

1898.	All causes.	Zymotic.
1st Quarter.....	18.87	1.72
2nd „ .....	20.01	2.75
3rd „ .....	18.76	3.65
4th „ .....	18.02	1.69

The zymotic rate, again, shows a considerable improvement. For 1898 it is 2.45; the previous year it was 3.11.

TABLE I.

WEEKLY RETURNS OF BIRTHS AND DEATHS FOR 1898.

1898. WEEK ENDING.	Deaths from all causes.	Annual Rate per 1,000.	Deaths from Zy- moties.	Zymotic Rate.	Births.	Annual Rate per 1,000.
Jan. 1...	23	19·60	2	1·70	42	35·80
" 8...	26	22·16	3	2·55	40	34·09
" 15...	23	19·60	3	2·55	38	32·39
" 22...	18	15·33	3	2·55	37	31·51
" 29...	24	20·44	4	3·40	36	30·66
Feb. 5...	19	16·17	—	—	48	40·85
" 12...	19	16·17	3	2·55	47	40·00
" 19...	14	11·90	—	—	45	38·26
" 26...	20	17·85	2	1·78	43	36·56
March 5...	31	26·36	3	2·54	42	35·71
" 12...	22	18·69	—	—	35	29·73
" 19...	27	22·93	2	1·62	47	39·93
" 26...	21	17·84	2	1·22	42	35·68
April 2...	26	22·07	3	2·54	45	39·04
" 9...	20	16·86	4	3·37	27	22·82
" 16...	30	25·46	3	2·54	38	32·25
" 23...	23	19·50	3	2·54	49	41·56
" 30...	25	21·20	4	3·39	39	33·07
May 7...	24	20·35	3	2·54	37	31·38
" 14...	23	19·50	1	·84	46	39·02
" 21...	30	25·42	2	1·69	44	37·29
" 28...	26	22·03	5	4·78	29	24·57
June 4...	19	16·10	5	4·76	42	35·59
" 11...	19	16·09	2	1·69	45	38·10
" 18...	24	20·32	4	3·38	39	33·02
" 25...	18	15·24	2	1·69	42	35·55
July 2...	25	21·15	4	3·38	43	36·37
" 9...	16	13·53	2	1·69	38	32·14
" 16...	11	9·29	3	2·53	40	33·81
" 23...	20	16·90	3	2·53	50	42·26
" 30...	14	11·82	2	1·68	43	36·31
August 6...	21	17·73	3	2·53	36	30·40
" 13...	24	20·25	5	4·21	49	41·35
" 20...	32	27·00	12	10·12	32	27·00
" 27...	28	23·62	5	4·21	37	31·22
Sept. 3...	24	20·25	5	4·21	51	43·03
" 10...	22	18·51	3	2·52	45	37·87
" 17...	23	19·39	5	4·44	32	26·98
" 24...	29	24·45	4	3·37	45	38·00
Oct. 1...	23	19·37	6	5·04	46	38·75
" 8...	22	18·70	5	4·25	35	29·48
" 15...	22	18·70	3	2·55	43	36·22
" 22...	27	22·73	2	1·68	48	40·40
" 29...	10	8·41	1	·84	36	30·30
Nov. 5...	24	20·20	—	—	38	32·00
" 12...	11	9·25	1	·84	32	26·91
" 19...	18	15·13	—	—	44	37·00
" 26...	24	20·13	2	1·67	38	31·87
Dec. 3...	25	21·00	1	·84	45	37·81
" 10...	31	26·05	1	·84	37	31·09
" 17...	23	19·32	3	2·52	35	29·41
" 24...	21	17·63	3	2·51	38	31·90
" 31...	18	15·11	—	—	39	32·74



1898,

MONTHLY TABLE OF DEATHS FROM ALL CAUSES AND ZYMOTIC DISEASES,  
WITH THE RATES PER 1,000 PER ANNUM.

MONTH.	No. of Deaths from all causes.	Annual Rate per 1,000 living.	No. of Deaths from Zymotic Diseases.	Annual Rate per 1,000 living.	Deaths of	
					Infants under 1 yr.	Persons over 60 yrs.
January ...	114	19.42	15	2.55	30	14
February ...	72	15.52	5	1.08	27	9
March .....	101	21.45	7	1.34	26	18
April .....	124	21.01	17	2.87	28	23
May .....	103	21.82	11	2.46	21	16
June .....	80	16.93	13	2.88	27	10
July .....	86	14.54	14	2.76	33	6
August .....	105	22.15	25	5.26	61	15
September..	98	20.65	17	3.63	34	15
October ...	104	17.58	17	2.87	34	14
November ..	77	16.17	3	.62	18	15
December ..	118	19.95	8	1.36	30	28
Totals ...	1182	18.88	152	2.45	369	183

TABLE II.

TABLE SHOWING COMPARATIVE STATISTICS BETWEEN WIGAN AND OTHER TOWNS DURING 1898.

Town.	Population.	Birth Rate.	Death Rate.	Zymotic Rate.	Infantile Death Rate 1,000 births.	Average Death Rate last 10 Years.
Barrow-in-Furness.	56,413	26.89	14.34	2.2	174	13.2
Birkenhead .....	113,094	30.34	17.50	2.78	187.6	19.50
Blackpool .....	...	...	...	...	...	...
Bradford .....	236,241	23.92	17.54	2.20	184.6	19.37
Bristol .....	316,900	28.50	17.14	2.68	164.55	18.4
Burnley .....	130,000	30.0	17.89	0.93	192.1	20.5
Burton-on-Trent ...	51,664	28.30	14.81	1.92	142	16.80
Bury .....	60,579	24.48	17.82	2.70	185	22.4
Cardiff .....	177,770	31.0	14.8	2.52	157	18.1
Carlisle .....	42,100	31.1	22.2	2.4	183	19.4
Crewe .....	40,910	33.3	16.89	2.5	169	16.76
Darwen .....	37,500	30.0	16.82	2.20	175	17.4
Derby .....	104,834	27.28	16.75	2.2	164	17.1
Folkestone .....	28,250	23.4	14.4	2.5	173	13.75
Grimsby .....	62,000	30.25	16.14	2.45	223	17.75
Huddersfield .....	102,454	22.48	15.91	1.51	153	17.84
Lancaster .....	39,424	25.94	14.14	2.12	167	16.75
Maidstone .....	33,831	22.60	17.90	1.68	138	14.82
Middlesbrough ...	89,246	32.52	22.04	4.2	190	20.30
Nelson .....	32,300	27.6	12.3	0.96	149	14.4
Newcastle-on-Tyne	22,3021	31.6	20.9	2.2	190.3	21.1
Northampton .....	67,414	52.1	14.7	2.0	188	16.0
Nottingham .....	239,284	28.9	17.7	2.37	178	18.1
Oldham .....	148,288	25.4	17.6	2.2	174	21.3
Plymouth .....	99,136	29.6	19.6	2.04	171	20.4

TABLE 11.—CONTINUED.

Town.	Popu- lation.	Birth Rate.	Death Rate.	Zymotic Rate.	Infantile Death Rate 1,000 births.	Average Death Rate last 10 Years.
Reading.....	69,477	26·64	14·59	1·63	153·4	15·11
Southampton .....	103,168	28·5	16·5	2·52	153	17·8
St. Helens.....	84,730	38·61	19·36	3·09	172	21·9
Stockport .....	81,000	31·3	20·3	4·01	2·17	23·4
Sunderland .....	143,849	35·3	22·5	3·7	202	21·8
Warrington .....	62,770	37·5	17·8	3·2	169	21·4
West Bromwich ...	63,500	35·7	19·1	3·1	182	19·8
Wolverhampton ...	88,051	35·7	21·0	3·7	202	21·25
WIGAN .....	61,697	34·49	18·88	2·45	170	22·69

TABLE III.

DEATH RATE FOR WIGAN DURING THE LAST TEN YEARS.

Year.	All Causes.	Zymotics.
1889 .....	22·7	4·1
1890 .....	26·5	4·6
1891 .....	24·7	3·7
1892 .....	24·4	3·89
1893 .....	24·2	5·1
1894 .....	18·9	3·2
1895 .....	22·52	3·6
1896 .....	23·09	4·09
1897 .....	20·99	3·11
1898 .....	18·88	2·45

CAUSES OF DEATH.

THE ZYMOTIC DISEASES.

The mortality from the principal zymotic diseases, namely, Small Pox, Scarlet Fever, Measles, Whooping Cough, Typhus, Enteric, Diphtheria, and Diarrhœa is at the rate of 2·45 per 1,000 of the population, and numbered 152 deaths, but if we exclude diarrhœa the number of deaths was only 106, which gives a rate of 1·69. The zymotic rate of 2·45 for 1898 is made up as follows :—

		Deaths per 1000
Smallpox.....	—	
Scarlet Fever.....	·37	”
Measles .....	·37	”
Whooping Cough.....	·43	”
Typhus .....	—	”
Enteric .....	·27	”
Diphtheria .....	·16	”
Diarrhœa .....	·74	”
Puerperal .....	·04	”
Erysipelas .....	·06	”

The zymotic rate during each of the four quarters of the year was :—

1st Quarter.....	1·72
2nd    ,, .....	2·75
3rd    ,, .....	3·65
4th    ,, .....	1·69



## SMALL POX.

I am again able to place on record the absence of this disease. The disease, however, is not absent from the country, as the following records show :—

**1898.**

CITY OR TOWN.	JAN.					FEB.				MARCH.				APRIL.					MAY.				JUNE.			
	1	8	15	22	29	5	12	19	26	5	12	19	26	2	9	16	23	30	7	14	21	28	4	11	18	25
London .....	1	...	...	3	1	...	...	2	1	2	1	...	...	...	...	...	2	3	...	...	...	1	...	2	...	2
Middlesbro' ..	9	2	8	15	5	53	215	71	206	253	88	103	120	61	43	36	42	16	12	6	11	11	7	...	3	1
Southampton	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6	2	
Birkenhead...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
West Hartle- pool .....	...	...	4	1	...	2	1	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	
Liverpool ..	...	...	...	1	2	1	2	1	...	...	...	...	...	2	...	...	1	...	...	...	...	...	...	...	...	
Thornaby-on- Tees .....	...	...	...	1	...	2	...	1	...	1	...	1	3	1	...	1	...	...	2	...	1	...	...	...	...	
Grimsby .....	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Darlington ..	...	...	...	1	1	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	
East Ham ..	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Bristol .....	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Bradford ..	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
York .....	...	...	...	...	...	1	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	
Leyton.....	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	
Huddersfield ..	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	
Whitby .....	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Stockton - on- Tees .....	...	...	...	...	...	...	...	...	1	1	...	1	1	...	6	1	2	...	2	...	...	...	...	...	...	
Sunderland ..	...	...	...	...	...	...	...	...	...	2	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	
Leigh .....	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Gateshead ..	...	...	...	...	...	...	...	...	...	...	1	...	2	1	3	2	2	3	...	...	...	...	...	...	...	
Tynemouth ..	...	...	...	...	...	...	...	...	...	...	1	...	2	...	...	1	...	2	...	...	...	...	...	...	...	
Oldham .....	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	
Leeds .....	...	...	...	...	...	...	...	...	...	...	...	...	2	2	...	...	...	...	...	...	...	...	...	...	...	
Newcastle-on- Tyne .....	...	...	...	...	...	...	...	...	...	...	...	...	1	...	3	...	...	...	1	3	1	1	1	1	...	
Goole .....	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	2	4	...	1	...	...	...	...	...	...	
Kingston-on Hull .....	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	1	...	...	1	...	...	...	
Whitehaven, ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	
Willesden ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	
South Shields ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	1	1	...	...	...	...	...	
Crewe .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	
Doncaster ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	
Carlisle .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	1	1	...	...	
Workington ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	
Rochester ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7	
Weekly total	10	2	14	21	10	60	223	75	211	260	92	107	131	70	57	44	55	25	17	17	16	15	10	5	11	6

	JULY.					AUGUST.				SEPT.				OCTOBER.					NOV.				DECEMBER.				
	2	9	16	23	30	6	13	20	27	3	10	17	24	1	8	15	22	29	5	12	19	26	3	10	17	24	31
Southampton ...	1											5							1								
Liverpool .....	1	1																		2	1		1				1
Middlesbrough...	3	2				1		1																			
Batley .....		1																									
London .....			1			3		1	2		1	1							1						1		
Bristol .....				1																							
Gateshead .....									1	2																	
Goole .....																		1									
Heywood .....																			1								
Weekly Totals ...	5	4	1	1		4		2	3	2	1	6						1	1	2	2	1		1	1		1

Our Small Pox Block is kept in constant readiness for any importation of the disease. If the predictions as to the “conscientious objections” permitted by the New Vaccination Act becomes true, then it will be necessary not only that we should have our hospital removed from the immediate neighbourhood of the other Isolation Wards, but also have in readiness quarantine wards for persons who have come into contact with the infected persons. A good plan would be for the Wigan Union to form a Conjoint Hospital Board and build a Small Pox Hospital, with the necessary observation and quarantine wards. It is not for me as a public official, in my Annual Report, to rail against the Government of the country for this piece of retrograde legislation. After going the length of providing glycerinated calf lymph for vaccination, the Compulsory Acts might have been allowed to remain in force, and well defined rules drawn up as to what should be meant by efficient vaccination. Calf lymph diluted with glycerine, in my opinion, will not produce as good a protection as arm to arm vaccination did formerly. The Royal College of Physicians has declared “that vaccination and re-vaccination is the only known preventive of small pox.” The new Bill should have placed vaccination under the Public Health Authorities of the country, and out of the hands of Boards of Guardians. Medical Officers of Health and others are viewing with alarm the results of the new Vaccination Act. Dr. Hill, the Medical Officer of Health for Birmingham, has something to say in favour of vaccination, for he points out that in the last epidemic of small pox in that city, of children under 10 years of age attacked by the disease not one of those vaccinated died, whilst 35 in each 100 unvaccinated cases proved fatal; of patients of all ages, less than 5 died of each 100 vaccinated, and over 31 of each hundred unvaccinated persons. He looks forward with grave apprehensions to the consequences of having in our country a multitude of unprotected people to face the small pox epidemics of the twentieth century.

A good deal has been said of late years in reference to the prevention of small pox by sanitary measures alone, and the system adopted at Leicester is often quoted, so that it is known as the “Leicester system.” Mrs. Garrett Anderson, M.D., has recently read a paper on the “Leicester system” before the Association of Registered



Medical Women, and I quote the following abstract, which was published in the "British Medical Journal" of January 21st, 1899, p. 155. "Mrs. Garrett Anderson, M.D., read a paper on the 'Leicester System' of Isolating Small Pox patients, proposed as a substitute for vaccination. The Leicester system had been fairly successful in Sydney, N.S.W., at Leicester itself, and in London in 1892-3. The attempt to keep out small pox was far more likely to be successful in a place like Sydney than at most other places, as no steamers arrived from Europe except after first calling at Adelaide and Melbourne, where, if small pox had declared itself during the voyage, the fact would at once be known at Sydney, and quarantine would be imposed. Even the shorter journey from New Zealand lasted several days, and there would be a good chance of a person who had contracted small pox before starting falling ill on board ship in time to prevent his being landed. Even at Sydney, however, those responsible for the public health wished for the assistance of a compulsory Vaccination Act, in spite of the fact that hitherto they had succeeded in keeping small pox from becoming epidemic. Leicester in 1892-3 suffered from an extremely mild type of the disease. In 357 cases there were only 21 deaths. There was some amount of vaccination done, and the isolation attempted was by no means complete; in 28 cases the patients were not isolated until after the seventh day of illness; 52 more were isolated on the sixth or seventh, and the quarantined people could not be induced to remain secluded, and in many cases they went about their ordinary work. It did not therefore seem that Leicester did much more in the direction of seclusion than was done everywhere in the presence of small pox. Gloucester in 1896-7 had a very severe type of disease, and here the attempt to isolate the sick, much more to quarantine suspects, broke down completely. As many as 1,267 out of the 1,979 were never taken away from their own homes, and the epidemic was at last stopped only by vaccination and re-vaccination on a very large scale. With the constant stream of traffic between London and Paris small pox could never be kept out of England permanently, even if it could by great effort be completely done away with for a time. Another point against the Leicester system was that individual protection could not by this method be secured by oneself. Everyone depended on his neighbours, upon cases not being missed, upon there being no errors of diagnosis, no breaking of rules; while by the method of getting protection through vaccination, people could depend upon themselves, and could get protection if they took the necessary steps to that end."

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## SCARLET FEVER.

We have 420 notifications of this disease for the year 1898, against 192 in 1897; and 22 deaths, against 10 in 1897.

	Notifications.	Removed to Sanatorium.	Deaths.
January .....	17	12	3
February .....	26	7	2
March.....	40	22	3
April .....	39	9	0
May.....	38	17	3
June .....	29	21	2
July.....	39	17	2
August .....	34	18	1
September.....	36	13	1
October .....	28	16	1
November .....	58	21	1
December .....	36	16	3
	<hr/> 420	<hr/> 189	<hr/> 22

The percentage of removals to cases notified has been 45.

The Sanatorium has become so popular that we have had much more difficulty in isolating at home than in previous years, and in consequence the wards have been full to overcrowding on several occasions. The effect of "sufficient" isolation at home has been something approaching to that of the hospital, so far as second cases having occurred in the same house, but it must be remembered that we took in the worst cases, and where the isolation would not have been satisfactory. We have had to refuse admission on several occasions when requested, owing to want of room.

We have had during the past year several cases which we term "return cases," that is, after a child has been discharged from hospital as cured, it has managed on its return home to infect some of the other children in the house. Even with the greatest precaution this has occurred, and I have inspected every case myself; yet these cases have occurred, and I thought it necessary to have the following handbill printed and given to the parent or guardian when the child was taken home:—

#### COUNTY BOROUGH OF WIGAN.

To Parents or Guardians having the care of patients who are discharged from the Sanatorium for Infectious Diseases after recovery from Scarlet Fever.

#### PRECAUTIONS TO BE USED.

1.—To have a Separate Bed from other children, and, if possible, a bedroom in which other children of the family do not sleep, for two weeks after returning home.

2.—The recovered person should not be allowed to Fondle, Nurse, or Kiss other Children of the family for a period of two weeks.

3.—Quiet exercise in the open air or a period of two weeks in the country, avoiding other children, is beneficial.

4.—No School, Church, or Public Entertainment should be attended for a period of three weeks after discharge.

5.—No General Mixing with other Children of the Family or other Playmates should be allowed till a full fortnight has elapsed after the discharge of the patient from the Sanatorium.

6.—The Medical Superintendent does not guarantee that the patient is Free from Infection when discharged as cured. Therefore the Corporation does not accept any responsibility in any fresh case or cases arising in the household after the return of the Convalescent Patient.

7.—It is essential that great care be exercised in not allowing a Convalescent Patient after scarlet fever to mix freely with others till a fortnight has elapsed after the return-home of the Patient.

8.—The use of a Disinfectant Soap, such as Carbolic Soap, for washing the patient is desirable.

WM. BERRY, D.P.H.,

Medical Officer of Health, and Medical Superintendent  
of the Sanatorium.

In February, in consequence of repeated exposure of a girl who was suffering from Scarlet Fever and neglect of the precautions given by the Inspector, I found it necessary to take proceedings against Mr. and Mrs. Brierley, of Schofield Lane. These persons kept a small hosier's shop, and as the case was a mild one they dispensed with the Medical attendant within a fortnight of the commencement of the illness. The Inspector found that before "peeling" was complete the girl was allowed about the house; he cautioned the parents and told them it was necessary for her to be kept in a room "isolated" till the peeling was complete; in consequence of no notice being taken I visited the house myself, and found the child downstairs in the peeling stage. The parents were summoned, and the Town Clerk prosecuted, the case appearing before the magistrates on February 17th, 1898, The father was fined 40s. and costs, and the case against the mother was withdrawn.







## MILK.

Voluntary notification of measles is still in force, and places us in a position to know, long before a death takes place, the locality in which measles arises, besides enabling us to make an effort at isolation in the patient's house. The medical profession have been loyal to us in notifying the first case that has come under their notice. At the commencement of the year we had a severe epidemic of this disease in the Whelley district, 88 cases being notified in March. By closing the school for a period of three weeks, and disinfecting the classrooms, we had a decline in the number of cases, and in August we had not a single notification. The total number of notifications, as shown in the following table, is 283, with 23 deaths, or 8·12 per cent.

The School teachers and School Board officers have given us every information in regard to suspicious cases, and these have been investigated by your Sanitary Inspectors, and in cases of doubt by myself.

Owing to the prevalence of this disease in December, 1897, I asked that the schools which would have re-opened on the 10th of January, 1898, after the Christmas holidays, should be closed till the 17th of January, and the Committee made the usual order on the managers. We had few cases afterwards till the outbreak in the Whelley district.

The cases notified are as follows :—

Month.	By Med. Man.	By Inspector.	Total.	Deaths.	Deaths. 1897.	Deaths. 1896.
January .....	22	17	39	1	1	5
February .....	9	2	11	0	0	20
March .....	43	45	88	3	0	34
April .....	37	39	76	10	4	23
May .....	28	5	33	3	6	11
June .....	12	6	18	3	1	7
July.....	6	1	7	2	5	7
August .....	0	0	0	0	6	6
September .....	4	0	4	0	2	2
October .....	1	0	1	0	2	0
November .....	3	1	4	0	4	0
December .....	2	0	2	1	3	1
	167	116	283	23	34	116

## WHOOPING COUGH.

The number of deaths from Whooping Cough and its complications is 27, against 43 for 1897.

The number of deaths is shown in the following table :—

	Deaths.	Deaths, 1897.
January.....	5	14
February .....	2	16
March .....	0	7
April .....	2	0
May .....	2	0
June .....	7	0
July .....	5	0
August .....	0	1
September .....	1	1
October .....	1	0
November .....	1	1
December .....	1	3
	27	43

## TYPHUS.

No case of Typhus has been notified during the past year.

## ENTERIC FEVER.

Enteric Fever, which is more or less endemic in Wigan, has furnished us with more cases than we had in 1897. The number of cases for 1898 are 92, against 63 in 1897, and 101 in 1896.

The cases notified are as follows :—

	Notifications.	Removed to Sanatorium.	Deaths.
January .....	5	1	3
February .....	11	3	1
March.....	6	2	0
April .....	3	0	1
May.....	1	1	0
June .....	2	0	0
July.....	4	4	1
August .....	9	6	2
September.....	16	9	1
October .....	24	9	7
November .....	6	4	0
December .....	5	1	1
	92	40	17

The number of deaths was 17 or 18·47 per cent. The long dry summer was in my opinion favourable to the development of Enteric Fever ; still we had no epidemic, and it was, I believe, more prevalent in our immediate vicinity than with us. The Borough Engineer has caused, at my suggestion, a liberal use of disinfectants when the street gullies have been cleaned out, and also at stated periods during the dry

season. I am more convinced than ever that this fever is endemic owing to previous soil pollution, and although our sewerage system is much improved, it will take years to get rid of the bacillus of Enteric from the soil. We can, however, do a great deal to prevent its development by paving the back yards, and when new houses are built on doubtful foundations we should insist on a concrete layer being first put down.

DIPHTHERIA.

Diphtheria has been less prevalent than in the previous year of 1897. We have had 13 cases notified, against 23, with 10 deaths, or a mortality of 79·92 per cent.

The following table shows the number of cases notified and the deaths :—

	Notified.	Deaths.
January .....	1	1
February .....	0	0
March .....	2	0
April.....	2	4
May .....	1	1
June .....	2	1
July .....	1	0
August .....	0	1
September .....	1	0
October.....	1	0
November .....	1	0
December.....	1	2
	13	10

DIARRHŒA.

The deaths from Diarrhœa have been chiefly in young children, and number 46, against 73 in 1897, and occurred in the following months :—

	Deaths.	0-1 year.	1-5 years.	Over 5 years.
January .....	1	1	0	0
February.....	0	0	0	0
March .....	0	0	0	0
April .....	0	0	0	0
May .....	0	0	0	0
June.....	0	0	0	0
July .....	3	2	0	1
August .....	21	15	6	0
September .....	13	7	5	1
October .....	7	5	2	0
November .....	1	1	0	0
December .....	0	0	0	0
	46	31	13	2



The average Diarrhoea death rate for 1898 is  $\cdot 73$ , against  $1\cdot 19$  in 1897, and  $\cdot 79$  per thousand in 1896. The greatest number of these deaths have occurred in children under 1 year (31 out of 46), and these have been chiefly "bottle fed," and in the hottest months of the year ; 44 of the deaths out of the 46 have occurred in children under 5 years of age. The months in which Diarrhoea is peculiarly prevalent, as shown by the death rate, are July, August, and September.

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## **ERYSIPELAS.**

Erysipelas is notifiable under the Infectious Diseases Act, 1889, but not under our Local Act. We have had four deaths in 1898, against one in 1897, and four in 1896.

Erysipelas is an infectious, inflammatory condition, due to a specific microbe ; it is not very fatal, but often follows slight wounds, especially when we have insanitary conditions which favour its development.

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## **PUERPERAL FEVER.**

This fever, which is the fever peculiar to lying-in-women, and is notifiable, gives us four cases notified with three deaths, against seven notified and five deaths in 1897, and seven notified and two deaths in 1896.

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## **DISINFECTION.**

Disinfection has gone on the same as in the previous year, fumigation of the room with sulphur, and the clothes, bedding, &c., in the steam disinfector. I find no reason, as yet, to change from our mode ; as I remarked in my last report, "it is sufficient, in my opinion, to destroy the germs of Measles or Scarlet Fever. What it is short of, however, in germicidal properties, it has the compensating power of causing all the windows and doors to be opened, thus allowing free admission of fresh air." I intend now to offer to fumigate all rooms in which cases of death have occurred from consumption, believing that this will be of some use in preventing infection to some extent, and it will also draw attention to the nature of the disease.

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## **SANATORIUM.**

The demand for admission into the Sanatorium increases, and it has been much more difficult during the past year to isolate cases in their own houses, and several times the Scarlet Fever Wards have been full to over-crowding. In removing cases to the hospital I have always tried to remove those cases which would prove a source of danger to the neighbourhood, and leaving those where a sufficient amount of isolation could be enforced.



The number of cases of infectious diseases notified is 529. The number removed to the Sanatorium is 237, a percentage of 45·14, against 45·64 last year.

The notifications were as follows :—

		Removed to Sanatorium	Died.
Smallpox .....	0	0	0
Typhus.....	0	0	0
Scarlet .....	420	189	11
Enteric.....	93	37	9
Diphtheria .....	12	0	0
Puerperal.....	4	0	0
Cholera.....	0	0	0
Others .....	0	11	1
	529	237	21

In Hospital December 31st, 1898, 26 ; namely : Scarlet, 23 ; Enteric, 3.

	Scarlet.	Enteric.	Others.	Total.
In-patients.....	20	4	2	26
Admitted in 1898	189	37	11	237
Died „	11	9	1	21
Remaining Dec. 31st, 1898 .....	23	3	0	26

The number of deaths in the Sanatorium was 21, of these 11 only from zymotic disease. This gives us a percentage of 8·86, against 3·81 in 1897.

Number of notifications compared with other years :—

Disease.	1892.	1893.	1894.	1895.	1896.	1897.	1898.
Small Pox .....	12	13	2	91	33	0	0
Typhus.....	18	20	34	33	20	1	0
Scarlet.....	219	335	359	161	151	191	420
Enteric.....	85	264	68	64	101	64	93
Continued .....	29	71	32	29	2	0	0
Diphtheria .....	20	16	10	13	10	23	12
Puerperal .....	12	10	7	5	7	7	4
Cholera .....	0	0	0	0	0	1	0
	395	729	512	396	324	287	529

## Analysis of notifications :—

1898.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Totl
Small Pox...	0	0	0	0	0	0	0	0	0	0	0	0	0
Typhus .....	0	0	0	0	0	0	0	0	0	0	0	0	0
Scarlet .....	17	26	40	39	38	29	39	34	36	28	58	36	420
Enteric .....	5	11	6	3	1	2	4	9	16	24	7	5	93
Continued ...	0	0	0	0	0	0	0	0	0	0	0	0	0
Diphtheria...	1	0	2	1	1	2	1	0	1	1	1	1	12
Puerperal ...	1	0	1	0	0	0	0	1	1	0	0	0	4
Cholera .....	0	0	0	0	0	0	0	0	0	0	0	0	0
	24	37	49	43	40	33	44	44	54	53	66	42	529

During the year there were 216 patients discharged from the Sanatorium cured, and 21 died ; making a total of 237.

The number of days they were in was 9,116, or 38·50 days for each.

The cost of maintenance was as follows :

1898.	Food.			Stimulants.		
	£	s.	d.	£	s.	d.
January .....	34	16	0	4	7	0
Febrnary .....	28	17	0	3	9	0
March .....	15	11	3	2	9	2
April .....	26	0	3	3	2	1
May .....	27	10	10	1	11	3
June .....	24	15	1	2	12	0
July .....	25	15	4	1	10	6
August .....	21	9	2	1	7	3
September .....	27	18	2	3	16	8
October .....	47	12	1	4	0	8
November .....	34	6	11	5	3	0
December .....	23	8	7	3	16	0
	£338	0	8	£37	4	7
Cost per Patient .....	£1	8	6 $\frac{1}{4}$	£0	3	1 $\frac{1}{2}$
„ 1897 .....	1	5	0	0	3	8 $\frac{1}{4}$

The Administrative Department cost :

1898.	Wages.			Board.			Porter, Rep'rs and Sundries.	Total.		
	£	s.	d.	£	s.	d.		£	s.	d.
January .....	23	4	5	22	7	9	86 18 2	132	10	4
February .....	23	17	10	23	7	7	23 3 6	70	8	11
March .....	24	12	2	23	12	3	20 8 7	68	13	0
April .....	25	11	8	25	2	6	104 10 0	155	4	2
May .....	19	6	8	22	2	0	24 18 1	66	6	9
June .....	23	6	4	19	16	4	43 18 9	87	1	5
July .....	25	18	3	20	10	10	128 11 1	175	0	2
August .....	25	7	7	23	11	6	19 17 7	68	16	8
September .....	28	7	6	24	17	8	20 14 9	73	19	11
October .....	27	6	8	24	5	8	201 14 9	253	7	1
November .....	27	6	8	26	9	0	21 14 11	75	10	7
December .....	27	6	8	26	9	0	35 4 0	88	19	8
	301	12	5	282	12	1	731 14 2	1315	18	8
Ditto, 1897 .....	£287	7	9	272	7	6	481 8 4	1041	3	7

The total cost of the Sanatorium for 1898 is as follows :

	£	s.	d.	Aver. per Patient	£	s.	d.
Master, Matron, and Nurses.....	584	4	6	2	9	3 $\frac{3}{4}$	
Porter, Repairs, etc.....	731	14	2	3	1	8 $\frac{3}{4}$	
Patients' Keep .....	338	0	8	1	8	6 $\frac{3}{4}$	
Stimulents.....	37	4	7	0	3	1 $\frac{1}{2}$	
Medical Superintendents and Services..	150	0	0	0	12	7 $\frac{3}{4}$	
Clerk .....	10	0	0	0	0	10	
	£1851	3	11	£7	16	2 $\frac{1}{2}$	
Ditto, 1897.....	£1389	4	7	£10	12	3 $\frac{1}{2}$	
Ditto, 1896.....	£1653	10	11	£11	6	6 $\frac{1}{9}$	

TABLE OF ADMISSIONS AND DISCHARGES FOR 1898.

1898.	Admitted.						Discharged.						Died.					
						Total.						Total.						Total.
	Small-pox.	Scarlet Fever.	Enteric	Typhus.	Others.		Small-pox.	Scarlet Fever.	Enteric	Typhus.	Others.		Small-pox.	Scarlet Fever.	Enteric	Typhus.	Others.	
January .....	0	12	2	0	2	16	0	12	4	0	2	18	0	1	1	0	0	2
February .....	0	7	2	0	0	9	0	11	0	0	2	13	0	2	0	0	0	2
March.....	0	22	2	0	1	25	0	10	3	0	1	14	0	0	0	0	0	0
April .....	0	9	0	0	0	9	0	9	1	0	0	10	0	0	1	0	0	1
May.....	0	17	1	0	0	18	0	21	0	0	0	21	0	1	0	0	0	1
June.....	0	21	0	0	0	21	0	16	1	0	0	17	0	3	0	0	0	3
July.....	0	17	4	0	1	22	0	16	1	0	0	17	0	1	1	0	1	3
August .....	0	18	6	0	3	27	0	17	0	0	2	19	0	1	2	0	0	3
September...	0	13	9	0	0	22	0	11	6	0	1	18	0	1	0	0	0	1
October .....	0	16	6	0	3	25	0	15	8	0	1	24	0	0	3	0	0	3
November ...	0	21	4	0	1	26	0	14	3	0	2	19	0	0	0	0	0	0
December ...	0	16	1	0	0	17	0	23	2	0	1	26	0	1	1	0	0	2
	0	189	37	0	11	237	0	175	29	0	12	216	0	11	9	0	1	21



The Sanatorium Staff consists of :—

Master.  
Housekeeper-Cook.  
Six Nurses.  
Laundry Maid.  
Assistant Laundry Maid.  
House Maid.  
Porter and Gardener.  
Medical Superintendent.

## CONSTITUTIONAL DISEASES.

### TUBERCULAR DISEASES.

Under this heading we include the Consumptive diseases, such as Phthisis-Pulmonalis, Tabes Mesenterica, Tubercular Meningitis, Wasting Diseases of Infants, and other Tubercular affections.

The number of deaths from Phthisis is 59, against 69 in 1897, and 66 in 1896, or an average of .93 per 1,000 of the population.

The number from Wasting Diseases of Infants is 66, against 56 in 1897, and 71 in 1896, or a rate of 1.05 per 1,000; and the number from other Tubercular Diseases is 11, against 11 in 1897, and 38 in 1896, or a rate of .17 per 1,000.

If taken together as Tubercular affections, we have 136 deaths, or a rate of 2.17, against 136 or a rate of 2.24 in 1897.

The death rate from Phthisis has diminished considerably in this country during the last few years, this being due to improved hygienic surroundings and improved sanitary conditions in towns, but there is yet much to be done in this direction in our own town. Since, however, the bacillus of tubercle was discovered by Koch in 1883, much attention has been paid to the prevention and cure of Tuberculosis.

The cure of Phthisis or Tuberculosis of the Lungs has recently received great attention at home and abroad, and Sanatoria for outdoor treatment are being advocated, and associations formed for promoting this object. Boards of Guardians have been approached and asked to erect suitable places, and to send all their cases out of their present hospital wards.

It is, however, with the *prevention* of Tuberculosis, rather than its cure, that we have to do. Much has been written of late on the infectivity of this disease. Many Medical Officers of Health, and even medical men in private practice, have advocated the notification of Phthisis, so that the Sanitary Authorities might adopt certain measures for the segregation of the patient and draw up certain rules as to the destruction of the sputum, the disinfection of clothing and rooms of the house, as well as of general cleansing such as is followed in other infectious cases. It is quite possible that we may run from one extreme

to the other ; it is not new to look on Phthisis as being infectious. In Italy, I believe, such was the case 50 years ago, and measures for disinfection, destruction of clothing, &c., were then adopted. Phthisis is not an acute infectious disease such as Scarlet Fever or Measles, or any of the Zymotics, where the development of the disease goes on to a crisis, and then a decline of the symptoms and recovery following. We must take into consideration the liability of certain persons and certain individuals who are more susceptible than others to this malady, and this predisposition cannot be called anything else than *hereditary*. How far this hereditariness can be diminished remains to be seen, and whatever steps be taken to prevent the spread of Phthisis, this personal factor must be taken into account. With regard to this, however, it would appear to be not so great a cause of Phthisis as we have been inclined to believe. Dr. Walshe, from enquiries he made, found the following results, which I embody in the form of a table taken from Dr. Arthur Ransome's paper in the "Practitioner" for June, 1898 :—

	Persons themselves Phthisical.	Persons Non-Phthisical.
Father or Mother Phthisical.	25·94	16·55
Both Father and Mother free from Phthisis.	57·41	47·11

A recent writer (vide "Practitioner" for June, 1898, p. 561), says that according to Professor Leyden not less than 1,000,000 is the annual mortality from consumption alone in the whole of Europe. "Taking all forms of tuberculosis together it has been computed that in France one out of every six deaths is caused by tuberculosis ; and this proportion may be assumed to hold good for this country. From pathological records it has been concluded that one-third, perhaps over one-half, of the persons who live to middle age suffer, or have suffered, from some form of tuberculous infection."

That something can be done, and has been done, to diminish the death-rate of Phthisis and other tubercular diseases is apparent, for Dr. Arthur Ransome has shown that the death-rate from Phthisis in England and Wales has fallen from 38 per 10,000 in 1838 to a little over 14 per 10,000 in 1895, a diminution of nearly two-thirds in 58 years. Dr. Ransome argues that "if phthisis diminish at the same rate during another thirty years, it will have entirely disappeared by the end of that period."

It has been shown by Dr. Haviland that "damp, clayey soil, whether belonging to the wealdon, oolitic, or cretaceous formation, is coincident with a high mortality ;" and the 7th report of the Registrar-General remarks that "the towns, villages, hamlets, or houses which are situated at or near undrained localities, or are on heavy, impermeable soils, or on low lying ground, and whose sites were consequently kept damp, had a very much larger number and proportion of cases of consumption than towns, villages, hamlets, or houses which



were situated on dry or rocky ground, or on light, porous soils, where redundant moisture easily escaped," and it is no doubt due to improvements in the drainage, &c., of towns, and precautions in unhealthy occupations, that has given rise to improvement in the death rate of Phthisis.

Dr. Arthur Ransome, after quoting Dr. Walshe's opinion as to hereditary influence in Phthisis, says, "It is therefore highly probable that heredity has much less to do with consumption than is popularly supposed, and that it ranks very far behind many other predisposing causes. A large proportion of cases arise without any phthisical family history in the past. Healthy families, leaving the country and coming to reside in crowded towns, often lose some members subsequently from consumption." Dr. Welch has told us that in the army, more than 60 per cent. of the cases are non-hereditary. (Vide "Practitioner," June, 1898, p. 590)

A third factor in the causation of tuberculosis is the consumption of tuberculous meat and milk, and the infectivity of the sputa of phthisical persons. It is to these causes that Sanitary Authorities are devoting much attention at the present time.

That animals do suffer largely from tuberculosis (bovine tuberculosis) is quite evident, the relative frequency being given as follows :—

In Victoria	4 per cent.	of slaughtered cattle.
„ Berlin	15	„ „
„ Denmark	20	„ „
„ France	22	„ „
„ England	25	„ „

The Royal Commission on Tuberculosis, which was appointed to inquire "what administrative procedures are available and would be desirable for controlling the danger to man through the use as food of the meat and milk of tuberculous animals; and what are the considerations which should govern the action of the responsible authorities in condemning for the purposes of food supplies, animals, carcasses, or meat exhibiting any stage of tuberculosis," report that there is a tendency in this country to exaggerate rather than underrate the danger from eating the flesh of tuberculous animals. The report of the previous Royal Commission had stated that "no doubt the largest part of the tuberculosis which man obtains through his food is by means of milk containing tuberculous matter."

Milk being largely an article of diet for young children and for the sick, it is readily conceivable how persons who are susceptible may have tuberculosis induced, especially in the form of consumption of the bowels.

The tubercle bacillus has only been found in milk where the udder is affected, yet the milk of a cow which is suffering from general tuberculosis should be looked on with suspicion.



## THE PREVENTION OF TUBERCULOSIS.

In considering what measures are necessary for the prevention of Tuberculosis we may again review its causation. It is caused :—

1st. By heredity.

2nd. Clayey subsoil, and undrained sites giving rise to damp houses, with insanitary surroundings, want of light, and free access of air, and overcrowding and injurious occupations.

3rd. From infectivity by contact with diseased persons, inhalation of dried pulverised tuberculous sputa, and the ingestion of tuberculous meat and milk.

When we are told than not more than 40 per cent. are due to hereditariness, the remaining 60 must be due to the second or third causes, or to both.

*1st. Hereditary.*—Much can be done, where it is known that there is an hereditary predisposition to phthisis or tuberculous disease, by greater care being taken to avoid the other two causes, and the greatest care taken to maintain the body in a perfect state of health, for the disease is often set up by some rash or injudicious acts.

*2. Insanitary Houses, Workshops, and Occupations.*—The usual sanitary measures should be followed, suitable sites, drainage, and proper foundations for new houses, concreted if possible ; avoidance of overcrowding, and the breathing of pre-breathed air ; regulations for workshops, and precautions for the following of injurious occupations. Sir Richard Thorne, in an article on “The dwelling-house in relation to tuberculous consumption” (see “Practitioner,” vol. xlv.), refers to the soil, structure, and surroundings of a house in the following detail :—

“*Soil.*—One which is dry naturally, or is freed by artificial means from the injurious influences of dampness and of the oscillations of underlying subsoil water.

“*Structure.*—So constructed as to be protected against dampness of site, foundations, and walls.

“*Surroundings* —(a) Such open space on at least two opposite sides of the dwelling-house as shall secure ample movement of air about it, together with its free exposure to the influence of sunlight. (b) Such construction of the dwelling-house as will secure for it habitable rooms, and throughout its interior free movement of air by day and by night, and the free access of daylight.

The absence of these implies darkness, dampness, stagnation, and impurity of air, and favours the spread of consumption.”

In regard to overcrowding as a cause of phthisis, Dr. Chalmers, medical officer of health for the city of Glasgow, states : “In an

investigation undertaken by the writer it was assumed that the number of persons per room in occupied houses (room density) would afford a reasonable method of indicating the risk of infection to which the individual was exposed during a considerable part of the day while breathing an atmosphere containing impurity of a definite sort, but in varying degrees of intensity, and the results may be thus summarised. The inquiry extended over twenty-four statistical divisions of the city of Glasgow, and the results are derived from 7,893 phthisis deaths occurring during five years in a mean population of 572,700 :—

Room density.	Phthisis death-rate per 100,000. (corrected for age distribution.)
1·29	159
1·77	172
2·23	235
2·54	255

—(The “Practitioner,” June, 1898, p. 711.)

3. *From Infectivity.*—Segregation of the afflicted, disinfection and destruction of the sputum, the prevention of persons intermarrying, with general observance of personal hygiene. With regard to food, milk probably is the most important of the two, and it has been found that cows are more liable to the disease than other animals, for it was found that in animals slaughtered in Leipzig in 1895 the proportions were as follows :—

Description of animals.	Number slaughtered.	Per cent. found tuberculous.
Oxen .....	8,454	28·14
Heifers .....	1,071	20·35
Cows .....	9,303	43·51
Bulls .....	4,090	23·83
Total cattle over one year old	<u>22,918</u>	<u>33·24</u>
Calves .....	57,427	·18
Sheep .....	44,154	·02
Pigs .....	111,077	2·73

The Commissioners, therefore, on this remark that “preventive and remedial measures should be applied in the first instance to the bovine race.”

Dr. Chalmers, M. O. H. for Glasgow, in an able paper on the subject, says : “Any system indeed which aims at preventing the use as food of the flesh or milk of tuberculous animals must obviously be incomplete unless accompanied by means for repressing the disease among the animals themselves. For if an animal becomes tuberculous only or chiefly because it is fed by a diseased one, or is housed with it, then it is in the power of every stock-breeder to resolve that from henceforth tuberculosis will be extinguished from among his herds. Professor Bang has demonstrated the possibility of this, and we observe with



satisfaction that the recent Commission has brought it into prominence by considering the whole question of the elimination of bovine tuberculosis."

The Royal Commissioners quote Professor Bang's views on the transmission of tuberculosis, which are as follows:—"That it is due to the ease with which the infection may be spread by air, water, and food, owing to the common life of healthy and unhealthy animals when in confined, badly-ventilated sheds. About 0·3 to 0·4 per cent. of all calves born, he thinks, are affected with hereditary tuberculosis; but the great majority of calves that become tuberculous are infected through milk. Practically, then, if calves born of tuberculous mothers are isolated from diseased animals from and after birth, and fed on boiled milk, they will escape the disease. Tuberculin, he believes, gives trustworthy results in over 90 per cent. of the animals tested, and in the great majority of those which reach the test reveals only *latent tuberculosis*."

"By merely separating the sound from the reacting animals, feeding the calves born on the first day of life on boiled milk, submitting once or twice a year the healthy animals to a fresh test, placing such as react on the other side of a partition, and purchasing only animals that have stood the tuberculin tests, he believes that in a few years a healthy herd may take the place of one that had been markedly affected." The views of the Royal Commission on this matter, therefore, are in favour of the tuberculin test as a means of eradicating the disease. In addition to the use of the tuberculin test, there should be systematic inspection of the cows in dairies and cowsheds, whether situated in the town or outside the municipal boundaries, providing the milk is sent into the town for distribution, and prevention of milk being sold from a cow suffering from disease of the udder. They state that "The Dairies, Cowsheds, and Milkshops Order, 1885, as amended in 1886, is the chief measure whereby local authorities can take steps to safeguard the purity of the milk supply. The Order contains very drastic sections, which, if thoroughly carried out by the local authorities, ought to go far to render satisfactory the housing of animals in cowsheds, and to protect the consumer from the danger of milk infected, through human agency, with such diseases as scarlet fever or diphtheria. But, from the evidence which we received, the order would seem in some places to be a dead letter, and in the districts where it is enforced no attempt is made to obtain uniformity of practice."

The Order empowers the local authorities to make regulations, amongst other things:—

(a) For the inspection of cattle in dairies.

(b) For prescribing and regulating the lighting, ventilation, cleansing, drainage, and water supply of dairies and cowsheds in the occupation of persons following the trade of cowkeepers and dairy-men.



(c) For prescribing precautions to be taken by purveyors of milk and persons selling milk by retail against infection or contamination.

Section 15 further states if at any time disease exists among the cattle in a dairy or cowshed, or other building or place, the milk of a diseased cow therein (a) shall not be mixed with other milk; and (b) shall not be sold or used for human food." (Vide report Royal Commission.)

Many public bodies are, in contracting for milk, putting a clause in their contract that the milk shall be free from tuberculosis; and Sunderland on the advice of their Medical Officer of Health, Dr. Scurfield, has drawn up regulations and a form of certificate to be signed by the Farmers and Purveyors of milk, a copy of which will be found in the appendix at the end of my report.

The other precaution to be taken in regard to milk is to boil it for at least one minute, or sterilize it in a properly made steriliser. With regard to *meat*, we want more efficient means of inspection, and abolition of private slaughter-houses, substituting public abattoirs; in doubtful meat care should always be taken that it is well cooked. The views of the Commissioners as to what meat should be seized will come under the article on meat inspection and slaughter-houses.

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## RHEUMATISM.

Rheumatism caused 7 deaths, as against 8 in 1897, whilst we have 67 deaths from heart affections, against 61 in 1897. The majority of the cases of heart disease are due to Rheumatism in one form or another.

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## LOCAL DISEASES.

### RESPIRATORY DISEASES.

Respiratory Diseases, such as Pneumonia and Bronchitis, caused 276 deaths, namely, Pneumonia, 163; Bronchitis, 113. Together they give us a death rate of 4.41 against 326 in 1897, or a rate of 5.39 per 1,000 of the population.

Respiratory affections are frequently the sequelæ of Whooping Cough and Measles, and the death rate from these diseases is influenced by the prevalence or absence of these two infectious diseases.

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## INQUESTS AND UNCERTIFIED DEATHS.

The number of inquests for 1898 is 83, against 85 in 1897, and the following verdicts have been recorded:—

1.—Natural Causes .....	13
2.—Accidental Causes :—	
„ Burned .....	12
„ Run over .....	2
„ Scalded .....	2
„ Colliery Accidents .....	13
„ Fall Downstairs .....	3
„ Found Drowned .....	11
„ Found Dead.....	1
„ Fall in Street .....	3
„ Blood Poisoning .....	2
„ Choked .....	1
„ Others .....	13
3.—Suicides :—	
„ Drowning .....	1
„ Hanging .....	3
„ Cutting Throat .....	3
	<hr/>
	83
	<hr/>

The uncertified deaths number 17, against 26 in 1897, and are as follows :—

Convulsions .....	8
Syncope.....	1
Bronchitis .....	1
Asphyxia .....	1
Premature Birth .....	6
	<hr/>
	17
	<hr/>

## PROPERTY UNFIT FOR HUMAN HABITATION.

The following list of Insanitary Dwellings has been reported on during 1898, and dealt with by the Insanitary Houses Committee under the Housing of the Working Classes Act.

### INSANITARY PROPERTY FOR 1898.

- 1, 2, 3, 4, 5, 6, 7, 8, and 9, Walmesley's Yard, Lord Street.
- 3, 4, 5, 15, 16, 17, 18, and 19a, Farrimond's Row, Wallgate.
- 6, 7, 8, 9, 10, 11, 11a, 12, 13, and 14, Farrimond's Row, Wallgate.
- 5, 7, 9, and 11, Mill Street.
- 1, 2, and 3, Johnson's Yard, Mill Street.
- 35 and 37, Clayton Street.
- 3 and 8, Mint Street.
- 4 and 5 „
- 10 „
- 11 „
- 12 „





8 TO 15, SPRING GARDENS.







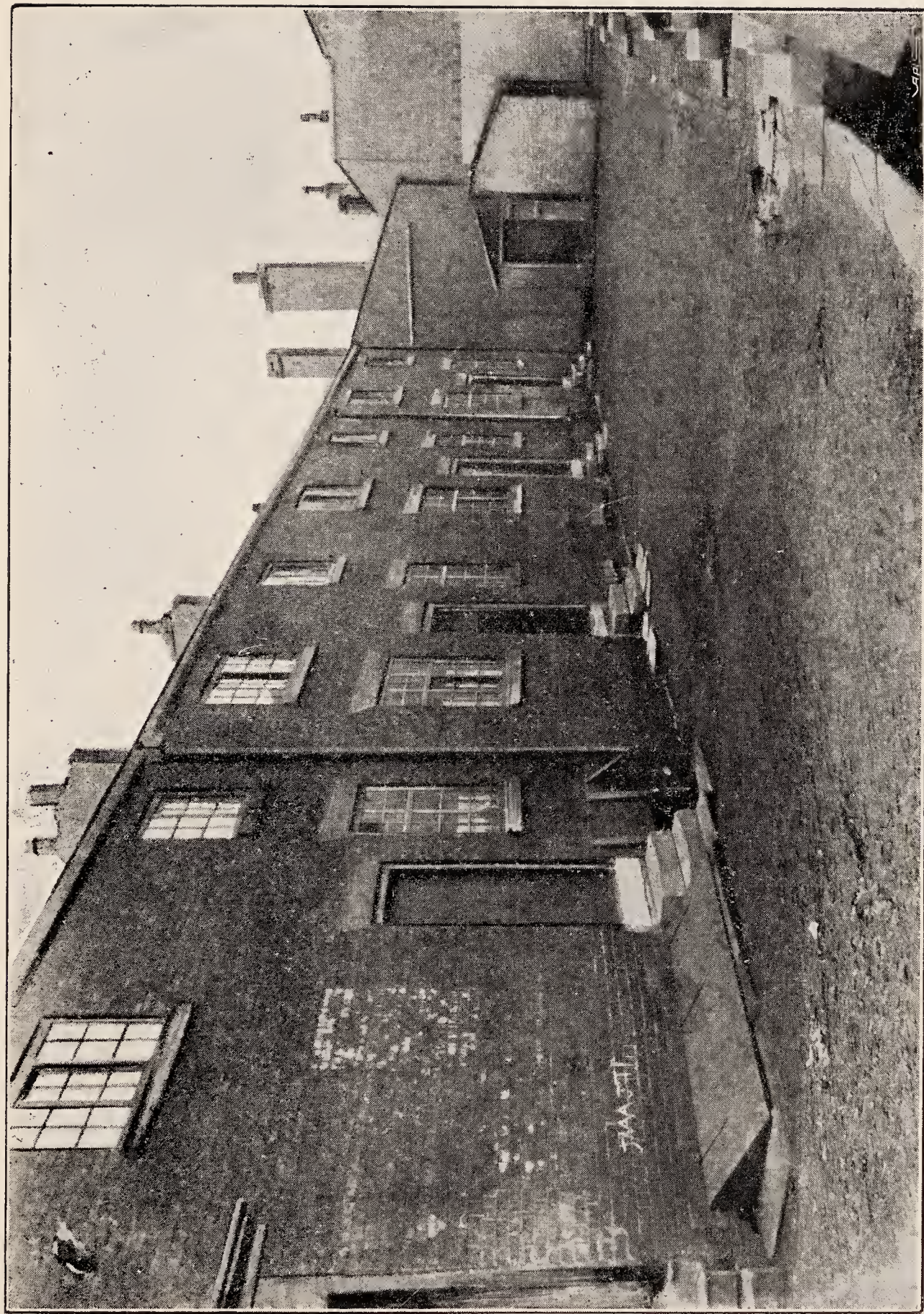


69 TO 75, SPRING GARDENS.







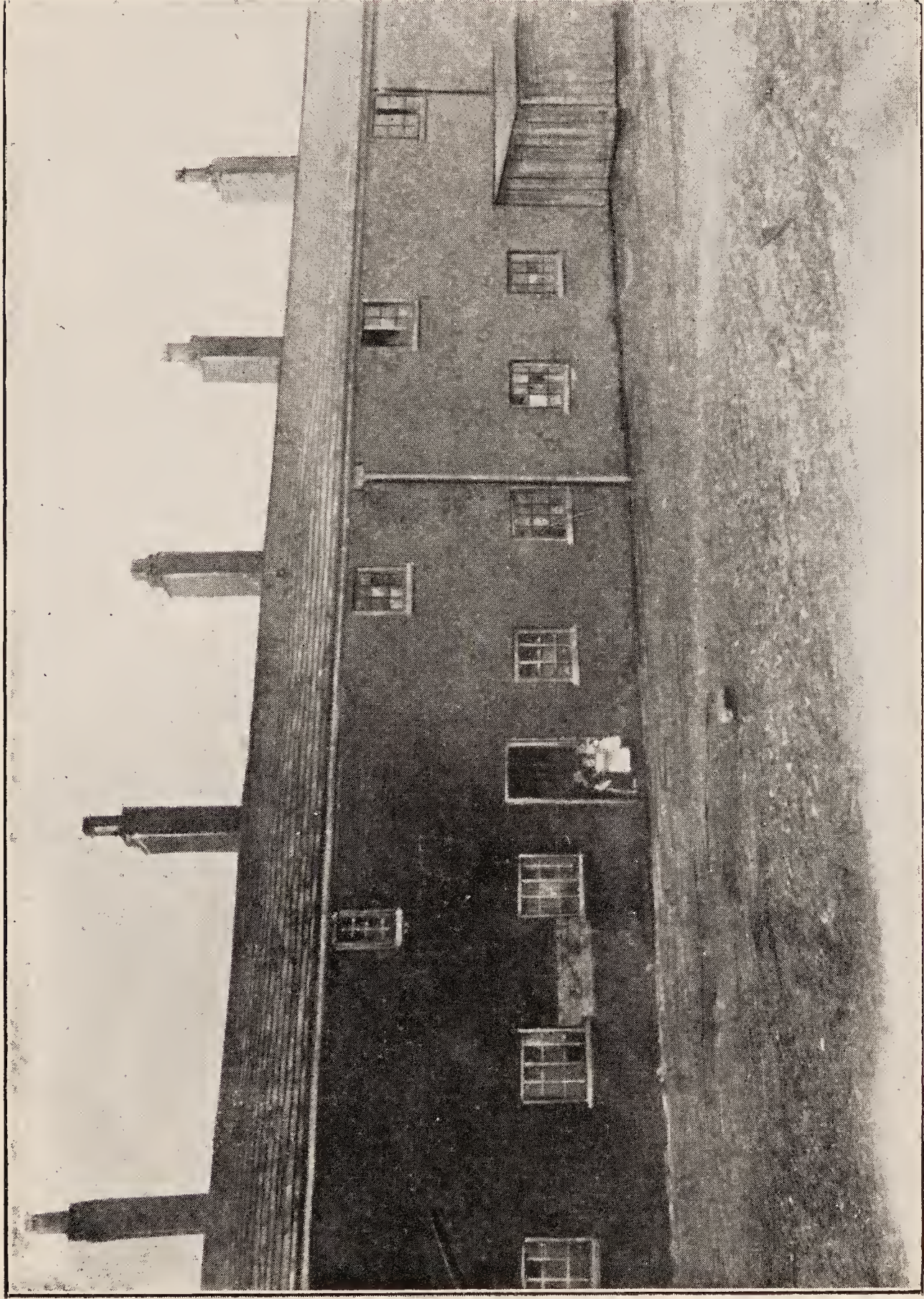


76 TO 80, SPRING GARDENS.









BACK OF 16 TO 24, SPRING GARDENS.





1, 2, 3, and 5, Mint Court.

4

„

8 and 9

„

206 and 208, Scholes.

186 and 188

„

1, 2, and 3, Manchester Place, Hardybutts.

72, 74, and 76, Hardybutts.

1, 2, 3, 4, 5, and 6, Maxwell's Yard, Millgate.

1, 2, 3, 4, 5, 6, and 7, Spring Gardens.

8, 9, 10, 11, 12, 13, 14, and 15, Spring Gardens.

16, 17, 18, 19, 20, 21, 22, 23, and 24, Spring Gardens.

25, 26, 27, 28, 29, 30, 31, 32, 33, 34, and 35, Spring Gardens.

36, 37, and 38, Spring Gardens.

41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57,

58, 59, 60, 61, and 62, Spring Gardens.

63, 64, 65, 66, 67, 68, 69, 70, and 71, Spring Gardens.

72, 73, 74, 75, 76, 77, 78, 79, and 80,

„

1, 2, 3, 4, and 5, Proe's Court, Frog Lane.

1 and 2, Dawber's Yard, Frog Lane.

96 and 98, Frog Lane.

The Committee have kept to the years 1892, 1894, and 1895 as a basis for the calculation of the compensation.

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## BAKEHOUSES.

The Bakehouses have been visited regularly by the Sanitary Inspectors. I have also paid one visit of inspection during the year, but have nothing further to add to my report of Dec. 30, 1897.

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## FACTORY AND WORKSHOPS ACT.

I have made a few inspections under this Act during the year 1898, and some of the factories, in reference to complaints from the Home Office in regard to Sanitary conveniences.

I append here Mr. Bishop's report under the Shop Hours Act, 1892-1895.

17, Rodney Street,

February 1st, 1899.

### SHOP HOURS ACT, 1892-5.

During the year 1898, 380 visits were made to shops, under the above Act. 36 were without abstracts, which were at once obtained; 87 were domestic; and at 58 no young persons were employed. I have had to call the attention of several proprietors to the illegality of allowing young persons to be in their shops after being employed in workshops during the day.

I have watched shops with the view of obtaining the number of hours young persons were employed, but had no cause for complaint.

WORKSHOPS.—112 visits were made to workshops, of which 20 were domestic. Four have been measured for cubic feet space ; one was overcrowded. Limewashing, ventilation, and w.c. accommodations have been ordered, and in each case the order has been complied with.

F. G. BISHOP,  
Inspector.

## **DAIRIES AND COWSHEDS AND MILK-SHOPS ORDER, 1885 AND 1886.**

Nothing has yet been done in Wigan under this Order, and it is highly desirable that at an early date regulations should be formed for the purpose of complying with it.

This Order extends to England and Wales only, and revokes the Order of 1879.

This Order, with an amending Order of 1886, provides :—

1. That Cowkeepers and Dairymen be registered by the local authority.

2. No one may begin to occupy as a dairy or cowshed any buildings not so used prior to this Order, unless he provide, to the satisfaction of the local authority, for the lighting, ventilation, air space, cleansing, drainage, and water supply, nor without giving one month's notice of his intention to the local authority.

3. No one shall occupy as a dairy or cowshed any building, whether so used previously to this Order or not, if and so long as the said conditions "are not such as are necessary or proper for (1) the health of the cattle ; (2) the cleanliness of the vessels ; and (3) the protection of the milk from infection or contamination."

4. Also in relation to dangerous infectious diseases, and persons suffering therefrom, shall be prevented from handling or the storing of milk until all danger of infection has passed.

5. Local authorities may from time to time make regulations for (a) inspection of cows, (b) prescribing and regulating the sanitary arrangements of dairies and cowsheds, (c) securing the cleanliness of milkshops, &c., and vessels, and precautions against infection.

The Royal Commissioners on Tuberculosis in their report state :—

(1) We recommend that the Local Government Board be empowered to require local authorities to adopt regulations as to dairies, cowsheds, &c., where that shall be found not to have been done already.



(2) That in future no cowshed, byre, or shippon, other than those already registered shall be permitted or registered in urban districts within 100 feet of any dwelling-house, and that the discontinuance of any one already existing shall be ordered on the certificate, either of the Medical Officer of Health that it is injurious to the health of human beings residing near it, or of the Veterinary Inspector that it is not a place wherein cows ought to be kept for the purpose of milk supply, and that it is incapable of being made so.

(3) That the conditions of the attached cowsheds that shall warrant the registering of a dairy in a populous place, whether technically urban or rural, in the future shall include the following :—

- (1) An impervious floor.
- (2) A sufficient water supply for flushing.
- (3) Proper drainage.
- (4) A depôt for the manure at a sufficient distance from the byres.
- (5) A minimum cubic contents as regards such districts of from 600 to 800 feet for each adult beast varying according to the average weight of the animals.
- (6) A minimum floor space of 50 feet to each adult beast.
- (7) Sufficient light and ventilation.

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## MEAT INSPECTION AND SLAUGHTER HOUSES.

During the year the Slaughter-houses have been frequently visited by the Sanitary Inspectors. I have from time to time visited several of them, and have also with the Chief Sanitary Inspector made several surprise visits. I have also made special inspections of tuberculosed cows at the request of the Chief Sanitary Inspector.

During the year two applications for the renewal of licenses to slaughter-houses have been refused owing to the unsuitability of the premises.

Action was taken against a man named Jarvis for having diseased meat in his possession on March 7th, 1898, the case was tried and he was fined £10 and costs.

During the coming year Mr. Bolton and myself will report on the erection of a public abattoir by the Corporation in accordance with the resolution of the Committee of September 6th, 1898, which is as follows :—“That the Medical Officer of Health and the Borough Engineer be instructed to prepare a scheme for an abattoir in the Borough, and that they be authorised to visit towns similar to Wigan where public abattoirs have been provided.”

The importance of a public abattoir cannot be over-estimated, for it is next to impossible to efficiently inspect meat in the numerous

slaughter-houses. Recognising the important factors that milk and meat are playing in the minds of medical men, sanitarians, and the public it was important to have a properly conceived plan in seizing animals affected with tuberculosis. The ideas I had formed and acted upon since becoming Medical Officer of Health were exactly what has been laid down by the Royal Commissioners.

*“ The entire carcase and all the organs may be seized :—*

- 1.—When there is miliary tuberculosis of both lungs.
- 2.—When tuberculous lesions are present in the pleura and peritoneum.
- 3.—When tuberculous lesions are present in the muscular system, or in the lymphatic glands embedded in or between the muscles.
- 4.—When tuberculous lesions exist in any part of an emaciated carcase.

*The carcase, if otherwise healthy, shall not be condemned, but every part of it containing tuberculous lesions shall be seized :—*

- 1.—When the lesions are confined to the lungs and the thoracic lymphatic glands.
- 2.—When the lesions are confined to the liver.
- 3.—When the lesions are confined to the pharyngeal lymphatic glands.
- 4.—When the lesions are confined to any combination of the foregoing, but are collectively small in extent.”

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## BLACK SMOKE NUISANCES.

Observations have been made from time to time and warnings have been given, but no action has been taken during 1898 against any of the offenders. The full occupation of the sanitary staff with infectious disease has necessarily prevented observations being more frequently taken. I believe the warnings have had a beneficial effect, and that some endeavours have been made to diminish this nuisance. I am more convinced than ever that eight minutes per hour for the emission of black smoke is a very liberal allowance.

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## WATER SUPPLY.

The Water Supply has been constant during the past year, and much progress has been made with the work, which will enable us to get a supply from Thirlmere by an arrangement with the Manchester Corporation. The purity of the supply has been maintained, and several inspections of the watershed have been made and various improvements followed. With the Chairman of the Committee (Mr. Alderman Richards), Mr. Charnock, the Town Clerk, and Mr. Bolton



the Borough Engineer, I made an inspection of the whole watershed on July 12th, 1898, and found it satisfactory.

The analyses of the water for the different months of the year have been made by Mr. Orsman, the Borough Analyst, and are here appended :—

*January.*—The water is practically the same as samples analysed last month, the only difference being that it is now a slight trace harder.

*February.*—The quality of the water is much the same as that of last month. The hardness is slightly less. The water is clear and well filtered.

*March.*—Since last month the water has lost a small quantity of its hardness, and contains slightly less albuminoids. The water is clear and well filtered.

*April.*—The above sample has slightly improved since last month, and with the increased action of the sunshine, more active oxidisation may be looked for.

*May.*—The water is somewhat harder than last month, due probably to more active action of the water in consequence of warmer weather. Otherwise, there is little change to report.

*June.*—Beyond a slight decrease in the amount of hardness, there is no change to report in the quality of the Wigan water.

*July.*—There is decrease again in the amount of hardness, and the albuminoids are slightly lower than last month. No nitrates are present, but the nitrites—two parts per million—are present and show active oxidisation.

*August.*—There is little change to record this month, the hardness and albuminoids being unaltered.

*September.*—Owing to the recent heavy rains, there is a slight increase in the organic matter and hardness, but this is very small. The water is clear and well filtered.

*October.*—There is little change to record in the condition of the water this month. If anything the water is slightly purer than a month ago.

*November.*—The water is somewhat harder this month, and owing to the heavy rains there is more soluble matter present. The albuminoids, however, remain about the same, and the water is clear and well filtered.

*December.*—The water taken this month shows little change from the last sample. The albuminoids and hardness are about the same. The water is clear and well filtered.

At the request of the Sanitary Committee, the Borough Engineer (Mr. Bolton) and myself were requested to report on the adaptability



of the waste water closet for the borough in substitution of pail closets. After visiting St. Helens and Lancaster, and inspecting several waste water closets in the Corporation property, we presented the following report, and there can be no doubt that the water carriage system is the most efficient system of excrement removal at present known. The adoption of the water carriage system of excremental removal will require a larger supply for the purpose :—

COUNTY BOROUGH OF WIGAN.

August 13th, 1898.

To the Chairman and Members of the Sanitary Committee.

Gentlemen,

In accordance with your request we have further considered the question of the conversion of the pail closet into the waste water closet, and have visited Lancaster and St. Helens, in both of which towns the water carriage system is employed to replace the old privy midden. In St. Helens, Mr. Broom, the Borough Engineer, was able to show us some of their waste water closets and also some of the water closets which are now replacing the pail and tub closets. From the inspection made in these towns and the information supplied to us by the Medical Officers of Health and Borough Engineers, and also from the experience we have of the waste water closets in our own town, we have no hesitation in saying that the water carriage system of removal of excrementitious matter is the best and the most preferable. We would therefore recommend :

1—That where conversions of the present pail closets are required, a water closet should be substituted according to the terms of the Provisional Order of 1896, Art. 4, sec. 2.

2—That your Committee should recommend to the Building and Streets Committee, that in all erections of new buildings, water closets should be required according to the terms of the Order, Art. 2, sec. 1.

3—We would recommend also that the water for such closets should be supplied free of cost, as is the case in Lancaster and St. Helens ; of course the effect of this would be a considerable increase in the consumption of water in the borough, and no doubt the Committee wish to know what proportion the increase is likely to attain. Taking the population at 60,000, and assuming (for the purpose of making a liberal estimate) that the whole of this number will have to be supplied with water for flushing purposes at the rate of  $2\frac{1}{2}$  gallons per head per day, the result would be an increase of 150,000 gallons per day.

As the conversion of the closets would be gradual, and would extend over a number of years, the burden which would be imposed by the adoption of the present proposal would not be so great as at first sight appears. We do not think the increased consumption, due to reconstruction, would amount to more than 50,000 gallons per day in

any one year, but in addition to this there would be of course the supply to closets of new houses, which cannot be a very serious item. In Lancaster water is also supplied free to baths, and in consequence it is not uncommon to find baths in many of the better class of cottages. In conclusion we would recommend that the pail closets should be gradually converted into water closets in accordance with the terms of the Provisional Order, 1896, and if these recommendations meet with the approval of your Committee, it will be our duty to report such cases where the reconstruction is required.

We are, Gentlemen,

Your obedient Servants,

WM. BERRY, Medical Officer of Health.

WM. BOLTON, Borough Engineer.

## RAINFALL.

Summary for 1898.

Month.	Rainfall in inches and tenths.	No. of days on which rain fell, being 0·1 of an inch or more.
January .....	2·52	14
February .....	2·16	22
March.....	1·42	17
April .....	1·67	14
May.....	3·36	20
June .....	2·81	16
July .....	0·56	9
August .....	5·07	19
September.....	1·37	11
October .....	3·69	18
November.....	3·25	17
December .....	3·37	24
	31·25	201

## UNPAVED YARDS AND PASSAGES.

I have also in this report appended a list of unpaved yards, and have nothing to withdraw from the statement made in my last report as to the importance of this matter in relation to infectious diseases in general, and also the general health and wellbeing of the inhabitants.

On the 11th of August the Town Clerk received a letter on this subject from the Local Government Board, and at the Sanitary Committee held on August 16th, the subject was referred to the Town Clerk and Medical Officer of Health for report. We have had several discussions as to the powers we possess to enforce this, and shall take action to remedy this under what powers we possess, till we have a revision of the present bye-laws.





## UNPAVED YARDS.

## ST. CATHARINE'S WARD.—(No. 3.)

3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23,  
25, 27, 29, 31, 33, 35, 37, 39, 41,  
43, 45, 47, 49, 51, 53, 55, 57, 59,  
61, and 63, Holland Street.  
1 and 3, Catherine Street.  
2a, 2, 4, 6, 8, and 10, Holland  
Street.  
12, 14, 16, 18, 20, 22, Holland Street.  
24, 26, 28, 30, 32, 34, 36, and 38,  
Holland Street,  
40, 42, 44, 46, 48, 50, 52, and 54,  
Holland Street  
8, 10, and 12, Platt Lane.  
1 and 3, Jane Street.  
14, 16, 18, 20, and 22, Platt Lane.  
24, 26, 28, 30, 32, and 34, Platt  
Lane.  
36, 38, 40, 42, and 44, Platt Lane.  
46, 48, 50, 52, 54, 56, 58, 60, 62, 64,  
and 66, Platt Lane.  
2, 4, and 6, Northumberland Street.  
2 and 4, Seed Street.  
1, 3, 5, and 7, Northumberland  
Street.  
68, 70, 72, 74, and 76, Platt Lane.  
87, 89, 91, 93, 95, 97, 99, and 101,  
Platt Lane.  
3, 4, 5, 6, 7, 8, 9, 10, and 11, Stanley  
Square.  
71, 73, 75, 77, and 79, Platt Lane.

51, 53, 55, 57, 59, 61, and 63, Platt  
Lane.  
1, 3, and 5, William Street.  
2 and 4, Kendrick Street.  
37, 39, 41, and 43, Platt Lane.  
2, 4, 6, 8, Golborne Street.  
10, 12, 14, and 16, Golborne Street.  
13, 15, 17, 19, 21, 23, 25, and 27,  
Golborne Street.  
1, 3, 5, 7, 9, 11, Golborne Street.  
33 and 35, Platt Lane.  
29 and 31, Platt „  
2, 4, and 6, Stanley Street.  
24, 26, 28, and 30, Stanley Street.  
32, 34, 36, and 38 „  
5, 7, 9, 11, 13, and 15 „  
25, 27, and 29, Caunce Street.  
31, 33, 35, 37, 39, 41, and 43, Caunce  
Street.  
45 and 47, Caunce Street.  
49, 51, and 53 „  
55, 57, 59, and 61 „  
63 and 65 „  
67 and 69 „  
71, 73, and 75 „  
77, 79, and 81 „  
2, 4, 6, 8, 10, 12, 14, and 16,  
Florence Street,  
1, 3, 5, 7, 9, 11, 13, and 15, Florence  
Street.

## VICTORIA WARD.—(No. 7.)

1 and 3, Leeds Street.  
16, 18, 20, 22, 24, 26, and 28, Miry  
Lane.  
30, 32, 34, 36, and 38, Miry Lane.  
40, 42, and 44 „  
46, 48, 50, and 52 „  
54, 56, 58, 60, and 62 „  
62 and 64, York Street.  
2, 4, 6, 8, and 10, Swann Street.  
12, 14, 16, 18, and 20, Swann Street.  
22, 24, 26, 28, 30, 32, and 34, Swann  
Street.  
36, 38, 40, 42, and 44, Swann Street.  
5 and 7, Leeds Street.  
7, 9, 11, 13, 15, 17, 19, 21, 23, 25, and  
27, Swann Street.  
29, 31, 33, and 35, Swann Street.  
23, 25, and 27, Taylor Street.  
19, Leeds Street.  
17, 19, and 21, Taylor Street.  
13 and 15 „

9 and 11, Taylor Street  
3, 5, and 7 „  
1 „  
1, 3, 5, 7, 9, 11, and 13, Herbert  
Street.  
6, 8, 10, 12, and 14, Herbert Street.  
2 and 4 „  
23 and 25, Miry Lane  
11, 13, 15, 17, 19, and 21, Miry Lane.  
1a, Herbert Street.  
2, 4, 6, 8, 10, 12, 14, and 16, Edith  
Street.  
1, 3, 5, 7, 9, and 11, Edith Street  
1, 3, 5, 7, 9, and 11, Snape Street.  
2, 4, 6, and 8 „  
3, 5, 7, 9, 11, 13, 15, 17, 19, and 21,  
Wilcock Street  
1, Wilcock Street.  
248, Wallgate.  
1, 3, 5, and 7, Pennyhurst Street.  
2, 4, 6, 8, and 10, Wilcock Street.



## VICTORIA WARD.—(No. 7.)—CONTINUED.

6, 8, and 10, Tickle Street.  
 192a, 192, and 194, Wallgate.  
 1a, 1, 3a, 3, 5, 7, 9, 11, and 13, Dobb's  
 Fold.  
 14, 15, 16, and 17, Dobb's Fold.  
 33a, 33, 35, 37, 39, and 41, Miry  
 Lane.  
 65 and 67, Miry Lane.  
 1, 2, and 3, Wall's Yard.  
 64, 66, 68, and 70, Wilcock Street.  
 53, 55, 57, and 59 „  
 5, 7, 9, 11, 13, 15, 17, and 19, Yates  
 Street.

4, 6, 8, 10, 12, and 14, Lea Street.  
 16, 18, and 20 „  
 23, 25, 27, and 29 „  
 15, 17, 19, and 21 „  
 1, 3, 5, 7, 9, 11, and 13 „  
 57, 59, and 61, Great George Street.  
 63, 65, 67, and 69 „  
 7 to 17, Appleton Street.  
 2 to 12 „  
 3 to 15, York Street East  
 40 to 50, Great George Street  
 78 to 92 „  
 94 to 108 „

## ST. ANDREW WARD.—(No. 8.)

400 and 402, Woodhouse Lane.  
 396 and 398 „  
 1, 3, 5, and 7, Horton Street.  
 386, 388, 390, 392, and 394, Wood-  
 house Lane.  
 336, 338, and 340, Woodhouse Lane.  
 281, Woodhouse Lane.  
 1, 3, 5, 7, and 9, Ball Street.  
 9, 10, 11, 12, 13, 14, 15, 16, and 17,  
 Vitriol Fold.  
 1 to 61, Holt Street.  
 263, Woodhouse Lane.  
 2, Canal Street.  
 13, 15, 17, Canal Street.  
 New Street.  
 251, 253, 255, and 257, Woodhouse  
 Lane.  
 218, 220, 222, 224, and 226, Wood-  
 house Lane.  
 1, 3, 5, 7, 9, and 11, Moorfield Street.  
 13, 15, 17, 19, 21, and 23 „  
 2, 4, 6, 8, 10, 12, and 14 „

212, 214, and 216, Woodhouse Lane.  
 7, 9, 11, 13, 15, 17, and 19, Ingram  
 Street.  
 21, 23, 25, 27, and 29, Ingram Street.  
 31, 33, 35, 37, and 39 „  
 41, 43, 45, 47, and 49 „  
 51, 53, 55, 57, and 59 „  
 61, 63, 65, 67, and 69 „  
 71, 73, 75, 77, and 79 „  
 81, 83, 85, 87, and 89 „  
 91 and 93, „  
 2, 4, 6, and 8 „  
 10, 12, 14, 16, 18, 20, and 22 „  
 198 and 200, Woodhouse Lane.  
 3, 5, and 7, Newark Street.  
 9, 11, 13, 15, 17, 19, 21, and 23,  
 Newark Street.  
 2 and 4, Newark Street.  
 160, 162, and 164, Woodhouse Lane.  
 166, 168, 170, 172, 174, and 176 „  
 178, 180, 182, 184, 186, and 188 „

## ALL SAINTS WARD.—(No. 10.)

1, Shelmerdine Street.  
 26 and 28 „  
 Hodge's Yard, Douglas Street.  
 1 to 6, Maxwell's Yard, Millgate.  
 103 and 105, Millgate.  
 12 and 14, Rodney Street.  
 53 and 55, Millgate.  
 1, 2, 3, 4, 5, 6, and 7, Marsden's  
 Court.  
 54, 56, 58, and 60, Hallgate.

2, 4, 6, and 8, Frank Street.  
 8 and 10, Manor Street.  
 31, 33, 35, and 37, Richmond Street.  
 23, 25, 27, and 29 „  
 15, 17, 19, and 21 „  
 48, 50, 52, 54, 56, and 58, Frog Lane.  
 68, 70, 72, 74, and 76 „  
 1 and 2, Parkinson's Yard.  
 64, 66, and 68a, Frog Lane.

## BOROUGH SURVEYOR'S DEPARTMENT.

The Borough Engineer has kindly furnished the following information :—

	Tons.	Cwts.	Qrs.
House refuse collected in the Borough from January 1st to December 31st, 1898 .....	16,538	13	2
Pail excreta removed .....	8,117	10	2
Nightsoil removed.....	619	16	1
No. of pail closets in Borough .....	8,430		
No. of pails collected in 1898 .....	469,184		
No. of pails collected in 1897 .....	466,812		
Cost (including washing and distribution) in 1898...	£1,886	18	6½
Cost (including washing and distribution) in 1897...	£1,960	14	8¾
Cost of collecting ashes during 1898 .....	£1,484	4	4½
or 1s. 9½d. per ton.			
Cost of collecting ashes in 1897 .....	£1,516	16	9¼
No. of privy middens in Borough .....	58		
No. of privy middens emptied in 1898 ...	435		
No. of privy middens emptied in 1897 ...	462		
No. of new houses erected in 1898 .....	222		
No. of slop closets put in in 1898 .....	211		
No. of water closets in Borough in 1898 .....	1512		

WM. BOLTON,  
Borough Engineer.

## LIST OF DEATHS IN THE VARIOUS WARDS.

Street.	Ward.	D'ths.	Street.	Ward.	D'ths.
Alliance Street .....	1	1	Byron Street .....	6	1
Altham's Yard .....	1	1	Brown Street .....	7	1
Arundel Street .....	2	4	Bigham's Yard .....	7	1
Ablett Street .....	4	1	Beech Hill Lane.....	8	1
Anderton Street.....	4	5	Barnsley Street .....	8	1
Ashton Street.....	4	4	Buckley Houses .....	9	2
Acton's Court.....	4	1	Bridgeman Terrace.....	9	3
Adelaide Street .....	5	12	Bank Yard, Standish-		
Acton's Walk.....	5	3	gate .....	9	3
Ashton's Yard, Princess			Bank's Yard, Coppull		
Street .....	5	1	Lane .....	9	1
Addison Street .....	7	1	Bishopgate .....	10	1
Appleton Street .....	7	3	Bottom Croft .....	10	3
Andrew Street.....	8	1	Bailey's Court.....	10	6
Ashton's Yard, Duke			Church Street.....	1	2
Street .....	9	3	Crawford Terrace .....	2	1
Ashland Avenue.....	9	1	Coop Street .....	2	2
Bold Street .....	1	2	Cheltenham Street .....	3	3
Boys' Well Lane.....	1	6	Caunce Street.....	3	9
Black Swan Terrace ...	1	1	Catherine Street.....	3	2
Burlington Street .....	2	4	Cecil Street.....	3	1
Bottling Wood .....	2	9	Cambridge Street .....	4	5
Bradshaw Street.....	2	6	Chancery Street .....	4	5
Baron Street .....	3	3	Caroline Street .....	5	8
Bolton Street .....	3	8	Chapel Street .....	5	4
Back Morris Row .....	3	1	Caldwell's Yard, Ade-		
Birkett Bank (odd) ...	3	2	laide Street .....	5	1
Birkett Bank Terrace...	3	1	Canal Yard, Wallgate..	5	1
Birkett Street.....	3	1	Chapel Lane, 83 to 139,		
Birkett Bank (even) ...	4	3	98 to 144.....	5	3
Bankes Street.....	4	1	Carlton Street.....	5	1
Bryham Street .....	4	2	Chapel Lane, 148 to 152	6	1
Belvoir Street.....	4	3	Chadwick Street.....	6	4
Bull and Dog Yard.....	4	1	Corporation Street.....	6	9
Bradshawgate.....	4	2	Clayton Street.....	7	10
Brown Street .....	4	3	Chadwick's Square.....	8	1
Brookhouse Street .....	4	4	Canal Street .....	8	4
Baldwin Street .....	4	1	Cartwright's Yard .....	9	1
Brown's Yard, Queen			Clifton Street .....	9	2
Street .....	5	1	Charles Street.....	9	1
Bradford Street .....	5	4	Cherry Croft .....	9	2
Bradford Place .....	5	2	Chapel Lane .....	10	5
Bridge Street .....	5	6	Cooper's Row.....	10	1
Brook Street .....	6	2	Crofters' Arms Yard ...	10	1
Byrom Street .....	6	8	Derby Terrace.....	1	1
Baker Street .....	6	2	Douglas Terrace .....	1	2
Bywater Street .....	6	1	Derby Street .....	2	1



## LIST OF DEATHS—CONTINUED.

street.	Ward.	D'ths.	Street.	War	D'ths
Dorset Street .....	3	2	Frog Lane, 2 to 80.....	10	2
Darlington Street .....	4	5	Fleming's Yard, Hall-		
Darlington Street East	4	6	gate .....	10	1
Dean Street.....	4	5	Greenough Street (Nos		
Dandy Shop Yard .....	5	1	even side) .....	1	3
Driving Lane .....	5	4	Greenough's Gardens ...	1	1
Dobson's Yard, Princess			Golborne Street .....	3	8
Street.....	5	1	Gaskell Street .....	3	1
Drake Street .....	6	1	Gee Street .....	4	2
Dobb's Fold.....	7	5	Gilroy Street .....	4	1
Dickenson's Yard, Lyon			Grundy's Yard .....	4	3
Street .....	7	1	Greenough's Row .....	4	5
Delph Street .....	8	3	Gordon Street .....	4	1
Diggle Street .....	8	1	German's Yard, Princess		
Dicconson Street.....	9	3	Street .....	5	1
Dicconson Terrace .....	9	2	Gore's Yard, Ironmonger		
Dicconson Crescent.....	9	1	Lane .....	5	1
Duke Street.....	9	3	Gerard Street .....	6	1
Douglas Road.....	9	2	Granville Street .....	6	2
Dawber's Court .....	9	1	Great George Street ...	7	12
Douglas Street .....	10	1	Gidlow Lane .....	8	10
Darlington Street, 2 to			Glebe End Street .....	8	1
66, 5 to 63 .....	10	1	Griffin Yard .....	9	3
Dawber Street .....	10	1	Golden Cross Yard.....	9	1
Dorning Street .....	10	1	Grayson's Yard .....	9	2
Every Street .....	1	2	Hardy's Court, Scholes..	1	1
Edwin Street .....	4	1	Holcroft's Yard .....	1	1
Egerton Street .....	5	2	Harrison's Square .....	1	3
Earl Street .....	9	2	Howard Street .....	2	5
Foundry Street .....	1	2	Holland Street .....	3	11
Farrimond's Yard,			Higham Street .....	4	3
Scholefield Lane .....	3	2	Harbybutts .....	4	17
Frederick Street .....	3	1	Hambleton Street .....	4	2
Fleece Yard, Scholes ...	4	1	Harper Street.....	4	1
Fogg's Place .....	4	3	Heaton's Yard, Cross		
Frankfort Street.....	4	1	Street .....	5	1
Fisher's Yard, Wallgate	5	1	Henry Street .....	5	1
Farimond's Row.....	5	1	Hodson Street.....	5	1
Frith Street .....	6	2	Haslam's Yard, Victoria		
France's Yard, Great			Street .....	5	2
George Street... ..	7	1	Heath's Yard, Faggy		
Frog Lane, 1 to 73, 96			Lane .....	5	1
to 186 .....	8	4	Henhurst Bridge.....	6	2
Francis Street.....	8	3	Hardman Street.....	6	1
Folly .....	9	7	Hey Street .....	8	3
Foy Street .....	10	2	Horsfield Street .....	8	1
Frank Street .....	10	1	Holt Street.....	8	3
Fairclough's Court,			Holme Street .....	9	1
Chapel Lane .....	10	2	Holme Terrace .....	9	2

## LIST OF DEATHS—CONTINUED.

Street.	Ward.	D'ths	Street,	Ward.	D'ths.
Harrogate Street .....	10	3	Land Street.....	8	1
Hope Street.....	10	1	Lord Street.....	9	3
Hallgate .....	10	3	Millgate (even) .....	1	2
Isabella Street .....	3	3	Marsh Lane .....	1	4
Ironmonger Lane .....	5	3	Molyneux Street.....	2	1
Ingram Street.....	8	5	Mint Street.....	2	1
Infirmary .....	9	1	Morris Row.....	3	5
Jockey Terrace .....	1	3	McCormick Street .....	4	3
Jane Street.....	3	2	Marsh's Court, Chapel		
John Street.....	4	5	Lane .....	5	2
Johnson's Yard, Chapel			Melverley Street.....	6	2
Lane .....	5	0	Milton Street .....	6	1
Johnson's Terrace,			Mill Street .....	7	3
Chapel Lane .....	5	1	Miry Lane, 1 to 67, 10		
James Street, Bradford			to 90 .....	7	9
Street .....	5	4	Mason Street .....	7	1
James Street, Chapel			Miry Lane, 62 to 75,		
Lane .....	5	1	92 to 102 .....	8	1
Jordan's Yard, Lyon			Moore's Buildings, Frog		
Street .....	7	1	Lane .....	8	1
Jackson's Row .....	9	2	Moss Street.....	8	3
Kay Street .....	1	1	Moorfield Street .....	8	3
Kendrick Street.....	3	1	Molyneux's Yard, Lord		
Kirkless Street .....	3	6	Street .....	9	1
Kearsley Street .....	8	1	Morris's Yard, Duke		
Kendal Street .....	8	1	Street .....	9	2
Kenyon Road .....	9	1	Millgate, 87 to 111, 1		
King Street.....	10	2	to 85 .....	10	2
Lower Morris Street ...	1	10	Maxwell's Yard .....	10	1
Lime Street.....	1	8	Market Street.....	10	2
Longshoot .....	2	8	Market Place .....	10	1
Linney Street .....	3	2	Mesnes Street (even) ...	10	1
Lorne Street .....	3	5	Manor Street .....	10	1
Leader Street .....	3	5	Newman Street .....	2	1
Leaches Yard Belvoir			Northumberland Street	3	5
Street .....	4	1	Neville Street.....	3	1
Lowe's Square.....	4	2	Newark Street .....	8	1
Leigh Street .....	4	2	New Square.....	9	1
Latham's Yard, Queen			New Lodge .....	9	3
Street .....	5	1	Orchard Street .....	1	2
Litherland's Yard,			Oxford Street.....	2	1
Bridge Street .....	5	1	Osborne Street .....	2	1
Letterewe Street.....	6	3	Ormandy's Houses .....	6	1
Lea Street .....	7	5	Oldfield Street.....	6	3
Leeds Street .....	7	2	Ormesher's Yard.....	7	2
Lyon Street.....	7	5	Primrose Hill .....	2	1
Lancaster's Entry .....	7	1	Portland Street .....	2	3
Lower St. Stephen			Perch Street .....	3	1
Street .....	8	2	Platt Lane .....	3	13



## LIST OF DEATHS—CONTINUED.

Street.	Ward.	D'ths.	Street.	Ward.	D'ths.
Prescott's Yard, Scho-			Scholefield Lane (odd)	4	8
field Lane .....	4	1	St. Patrick Street .....	4	4
Pendlebury's Yard, St			Scholes, 1 to 165.....	4	3
Patrick Street.....	4	1	Sayer's Yard, Scholes...	4	2
Princess Street .....	5	9	Spring Street .....	4	4
Pipe Shop Yard .....	6	1	Silver Street .....	4	8
Poolstock Lane .....	6	10	Swan Meadow Road ...	6	1
Pool Street.....	6	14	Sharpe Street .....	7	2
Pottery Street.....	6	2	Snape Street .....	7	4
Pottery Terrace .....	6	2	Swann Street .....	7	6
Pottery Road .....	6	2	Scott Street .....	8	1
Piper's Alley .....	6	1	Stopforth Street.....	8	1
Peet Street .....	6	3	Swinley Road .....	9	3
Pennyhurst Street .....	7	2	Swinley Street .....	9	4
Pitt Street .....	7	3	Standishgate, 38 to 140,		
Prescott Street .....	8	13	85 to 143.....	9	3
Park Road, 15 to 35, 32			Shaw Street .....	9	2
to 48.....	8	1	Scarisbrick Street .....	9	1
Penson Street.....	9	1	Saracen's Head Yard...	9	1
Parr's Court, Douglas			Shelmerdine Street.....	10	8
Street .....	10	1	Spring Gardens .....	10	22
Powell's Yard, Hallgate	10	1	Turner Street .....	2	4
Queen Street .....	5	7	Teck Street.....	4	2
Queen's Hotel Yard ...	7	2	Tickle Street .....	7	1
Rigby's Yard, Scholes	1	8	Taylor Street ..	7	2
Robinson's Square .....	1	1	Top Croft.....	10	5
Russell Street.....	1	6	Upper Morris Street ...	1	16
River Street .....	2	1	Union Street .....	4	10
Regent Street.....	2	2	Union Workhouse .....	8	33
Rupert Street.....	4	4	Upper St. Stephen		
Rylands Street .....	8	2	Street .....	8	4
Rowbottom Square.....	10	1	Upper Dicconson Street	9	2
Station Road .....	1	1	Vaughan Street .....	2	4
Standish's Yard .....	1	1	Vine Street.....	2	2
School Street .....	1	11	Von Blucher Square ...	3	1
School Lane .....	1	6	Vauxhall Road .....	4	4
Scholes, 2 to 138 .....	1	4	Victoria Street .....	5	6
Shaw's Yard .....	1	2	Vere Street.....	7	4
Standishgate, 1 to 75...	1	3	Vitriol Fold.....	8	1
Scholes, 140 to 230.....	2	2	Withnall Street .....	1	1
Sole Street .....	3	1	Windmill Street.....	1	1
Stone's Yard, Bolton			Wood Square, Lime		
Street .....	3	1	Street .....	1	2
Scholes, 169-279 .....	3	3	Water Street .....	1	1
Stanley Street.....	3	5	Westminster Street ...	2	1
Scholefield Lane (even)	3	7	Windsor Street .....	2	6
Swift's Yard, Schole-			Weston Street.....	2	1
field Lane .....	3	5	Whelley (even side)....	2	10
Sovereign Road .....	4	7	Wallace Lane .....	2	3



## LIST OF DEATHS—CONTINUED.

Street.	Ward.	D'ths.	Street.	Ward.	D'ths.
Whelley (odd numbers)..	3	8	Wilcock Street .....	7	3
William Street .....	3	2	Wallgate, 104 to 248	7	11
Windermere Street.....	3	1	Woodhouse Lane ... ..	8	22
Well Street.....	3	2	Wrightington Street ..	9	1
Wellington Street.....	4	6	Wigan Lane .....	9	14
Warrington Lane .....	4	2	Wright's Yard, Wigan		
Walmsley Street.....	4	3	Lane .....	9	2
Wilton Street.....	4	2	Whittaker's Yard,		
Wallgate, 69 to 135 ...	5	3	Wigan Lane .....	9	1
Wigan's Yard, Queen			Wiend .....	10	4
Street .....	5	1	Walmsley's Square, Frog		
Wood's Street.....	5	3	Lane .....	10	2
Wood Street .....	5	3	Yate's Yard, Wallace		
Wood's Yard .....	5	1	Lane .....	2	2
Wallgate, 267 to 313,			Yates Street .....	7	2
250 to 304 .....	6	2	York Street.....	7	10
Wignall Street .....	6	2	York Street East.....	7	1
Walmer Street .....	6	7			



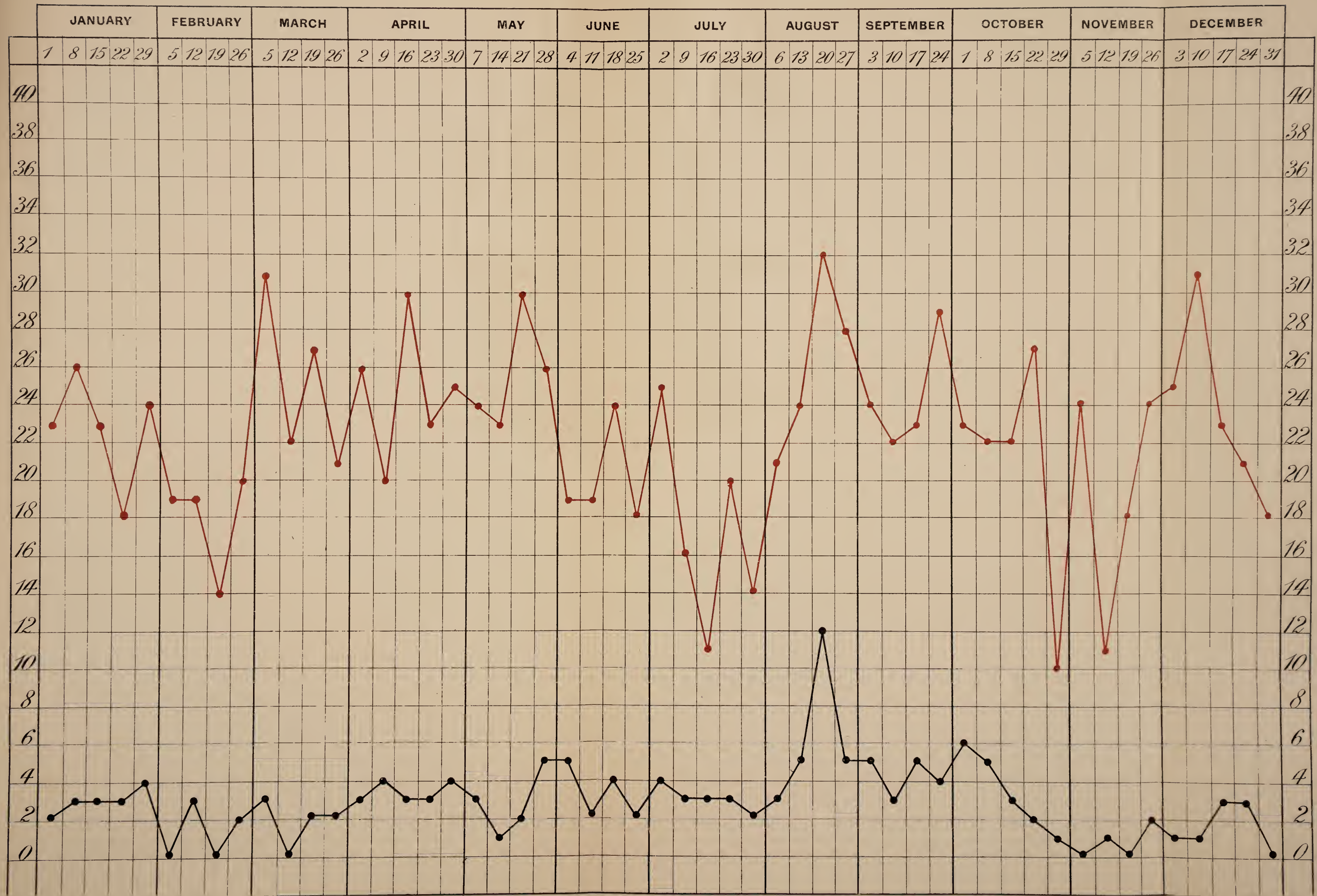


# DEATH RETURNS CHART 1.

: 1898 :

All Causes (Red)

Zymotics (Black)



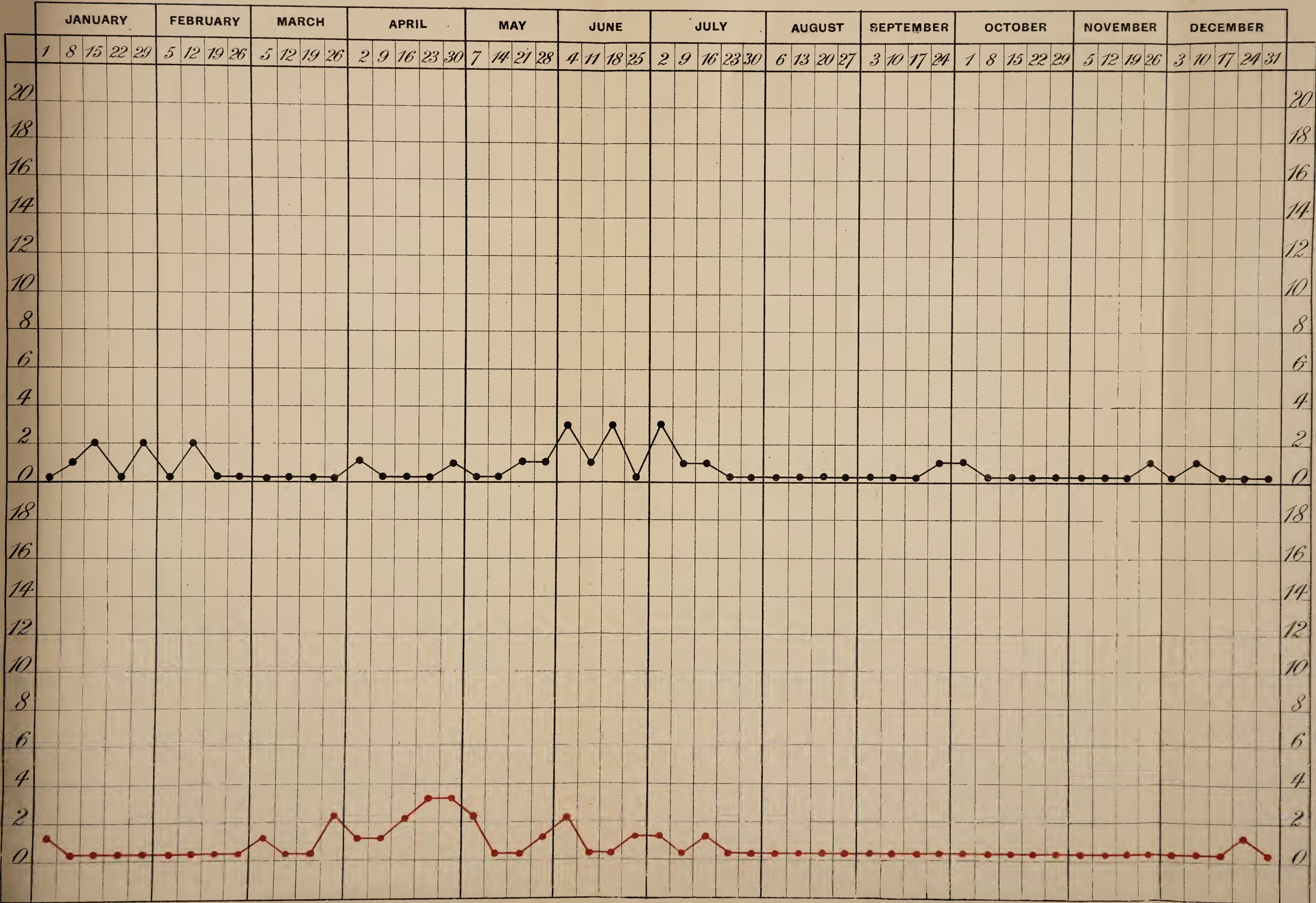




\_\_\_\_\_ : 1898 : \_\_\_\_\_

## Measles (Red)

## Whooping Cough (Black)







## APPENDIX I.

**Borough of Sunderland.**

CERTIFICATES will be granted by the Health Committee to Dairy Farmers, respecting the Milk supplied from their Farms, if, in addition to complying with the Regulations made by the Council under the Dairies, Cowsheds, and Milkshops Order of 1885, they also carry out the following Regulations as to the Construction and Management of their Farms and Dairies :—

**CONSTRUCTION.**

1. The byre must be well lighted, ventilated, paved, and drained  
(In a well-lighted byre, every part of the byre should be easily visible in the day time with the doors closed.)  
(In a well-ventilated byre the air will not feel oppressively close, or smell disagreeably when the cows are all housed and the doors shut.)
2. The dairy must not communicate directly with the house, and must be well ventilated.
3. The place used for washing and boiling the milk utensils must not communicate directly with the house, and must have a proper water supply.
4. An efficient refrigerator or cooler for the milk must be provided.

**MANAGEMENT.**

1. Only cows which pass a Veterinary Surgeon's examination, the examination to include the application of the Tuberculin test, must



be kept. The Veterinary Surgeon's certificate for each cow, together with the temperature chart after the application of the Tuberculin test, must be sent to the Medical Officer of Health. Newly-bought cows must be kept apart from the others till they have been examined and tested.

2. The milk must be of first-rate quality.

(Samples of the milk will be taken from time to time to ascertain that the quality is really first-rate.)

3. The cows must be kept as clean as possible.

4. The byre must be kept as clean as possible. The ceiling should be cleared of dust and cobwebs at least every three months, and the walls and ceilings whitewashed every six months. The manure should be taken out twice a day, and the walks and gutters flushed with water.

5. The farmer must at once notify any case of infectious disease, including Consumption, Measles, and Whooping Cough, occurring on the farm, or in the families of his employés, and take measures, satisfactory to the Medical Officer of Health, for preventing the possibility of the infection of the milk by such case.

6. Hay or food must not be stored in the byre, but kept in an adjoining building.

7. The dairy must only be used as a dairy, and the place for washing the milk utensils for that purpose only.

#### MILKING.

1. The air of the byre must be kept as free from dust as possible, and at milking time especially so.

2. The udders and teats must be cleaned before milking.

(It is also recommended that the tail and hind quarters of the cows should be clipped.)

3. The milker must wash his or her hands thoroughly before milking, and also rinse the hands in water after milking each cow.

4. The milk must not remain a moment longer in the byre than is absolutely necessary, and must be at once strained and cooled.

5. The milk of any cow showing signs of disease of the udder, or of other disease, must not be used for sale.

## [FORM OF CERTIFICATE.]

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## Borough of Sunderland.

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*To the Health Committee of the Council of the County Borough of  
Sunderland.*

I.....do hereby undertake

(1) To keep on my farm .....  
only cattle which pass the Tuberculin test and a Veterinary Surgeon's  
examination.

(2) To notify, immediately on my becoming aware of it, to the  
Medical Officer of Health for the Borough, any case of Infectious  
Disease, including Consumption, Measles, and Whooping Cough,  
occurring either on my farm, or in the families of my employés, and to  
take such measures as may be satisfactory to the said Medical Officer  
for preventing the possibility of the milk being infected by such case  
of Infectious Disease.

(3) Not to use for sale the milk of cows which show signs of  
disease of the udder or other disease.

(4) To comply with the Regulations made under the Dairies,  
Cowsheds, and Milkshops Order, by the Council of the Borough of  
Sunderland, and also with all the special Regulations made by the  
Health Committee of the said Council for the purpose of guarding  
against the danger of conveyance of disease by milk.

I am fully aware that any breach of the Regulations referred to  
above will result in the immediate cancelling of the Certificate granted  
by the Health Committee on the understanding that the said regula-  
tions will be faithfully carried out; and I undertake to afford every  
facility for inspection to any person appointed for that purpose by the  
Health Committee of the Sunderland Town Council.

(Signed) .....

Date.....



[FORM OF CERTIFICATE.]

---

## COUNTY BOROUGH OF SUNDERLAND.

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**This is to Certify** that \_\_\_\_\_

supplies milk from his farm \_\_\_\_\_

in compliance with the Special Regulations drawn up by the Health Committee to guard against the danger of the conveyance of disease by milk, one of these Regulations being that all the cows on the farm must be ascertained to be free from Tuberculosis or Consumption, both by the Tuberculin test and by the examination of a Veterinary Surgeon.

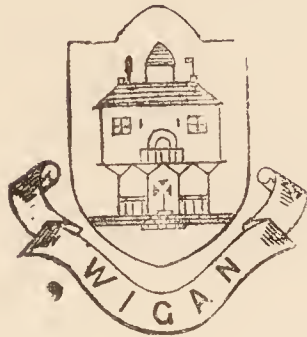
Signed on behalf of the Health Committee of  
the Council of the County Borough of  
Sunderland,

\_\_\_\_\_  
Medical Officer of Health.

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**N.B.—This Certificate must be renewed every year, and will be cancelled immediately if any breach of the regulations above referred to is committed.**

COUNTY BOROUGH OF WIGAN.



# ANNUAL REPORT

OF THE

CHIEF SANITARY INSPECTOR.

*JOHN SUMNER, Assoc. San. Inst.*

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WIGAN :

THOS. WALL AND SONS, PRINTERS, "OBSERVER" OFFICE, WALLGATE.  
1899.







Summary of Nuisances dealt with	...	...	...	...	...	56, 57
Common Lodging-Houses...	...	...	...	...	...	57, 59
Slaughter-Houses, &c.	...	...	...	...	...	57, 59
Canal Boats	...	...	...	...	...	58
Infectious Disease (Prevention Act)	...	...	...	...	...	58
Food and Drugs and Margarine Acts	...	...	...	...	...	58
Fellmongers	...	...	...	...	...	59
Gut Scrapers	...	...	...	...	...	59



# Annual Report of the Chief Sanitary Inspector.

SANITARY DEPARTMENT,

17, RODNEY STREET,

FEBRUARY 1st, 1899.

*To the Chairman and Members of the Sanitary and Sewerage Committee.*

GENTLEMEN,

I have the honour to submit to you my Eighth Annual Report of the work done by the staff of the Sanitary Department during the year ending December 31st, 1898.

House to house inspection has been carried out as far as possible, but owing to the large number of infectious cases reported during the year has not been as well taken in hand as I would have liked.

There have been numerous observations of smoke taken, and all the manufacturers have been written to on the subject.

The factories and workshops have had every attention at the hands of Mr. F. G. Bishop, with the result that they are now in a very satisfactory condition.

## SUMMARY OF NUISANCES DEALT WITH DURING 1898.

Houses and Premises Inspected	...	...	...	3453
Nuisances Discovered	...	...	...	919
„    Abated	...	...	...	988
Notices Issued (Preliminary)	...	...	...	434
„    (Formal)	...	...	...	194
Letters <i>re</i> Nuisances	...	...	...	103
Re-inspections made (about)	...	...	...	4500
Nuisances on the books December 31st, 1897	...	...	...	178
„    „    „    1898	...	...	...	109

## NUISANCES DEALT WITH.

Defective Drains	...	...	...	41
Choked Drains	...	...	...	115
Defective Gullies	...	...	...	10
Defective Sink Wastepipes	...	...	...	15
Sink Wastepipes connected to drains	...	...	...	35
Bath or Lavatory Wastepipes connected to drains	...	...	...	4
Soilpipes Defective	...	...	...	2
„    Unventilated	...	...	...	8
Defective Water Closets	...	...	...	16
„    Pail	...	...	...	73
„    Waste Water Closets	...	...	...	6
„    Ashplaces	...	...	...	36

Defective Privies	...	...	...	...	9
„ Urinals	...	...	...	...	2
„ Spouts	...	...	...	...	47
„ Roofs	...	...	...	...	43
„ or Unpaved Yards and Passages	...	...	...	...	127
Houses without proper Drains	...	...	...	...	51
Houses without proper Water Supply	...	...	...	...	19
„ with Damp Walls...	...	...	...	...	1
„ Overcrowded	...	...	...	...	51
„ Filthy	...	...	...	...	54
„ with Filthy Closets	...	...	...	...	55
Defective Middensteads	...	...	...	...	5
Keeping of Animals (including poultry and pigeons)	...	...	...	...	16
Accumulations of Manure	...	...	...	...	13
„ Water	...	...	...	...	10
Insufficient Closet Accommodation	...	...	...	...	1
Miscellaneous	...	...	...	...	30
Nuisances from Smoke	...	...	...	...	3

### COMMON LODGING HOUSES.

The Common Lodging Houses have been regularly visited both by day and night, by the Medical Officer of Health and myself, and in no instance of registered houses have we had occasion to institute proceedings. The convictions refer to houses that have been used as Common Lodging Houses without being registered.

No. of Common Lodging Houses Registered in Borough	16
„ Lodgers Registered for	531
„ Visits by day	1412
„ „ night	408
„ Lodgers reported as being received	140339
„ Prosecutions	5
„ Convictions	5
Amount of Fines	£3 12s. 6d.
„ Costs	£1 2s. 6d.

### SLAUGHTER-HOUSES.

There are now 20 slaughter-houses, one fellmongering establishment, and two gut-scraping premises registered in the Borough, and these have been regularly visited and inspected during the year.

The Markets have been regularly visited and generally found satisfactory.

The following shows the unwholesome food seized.

No. of Seizures.	Article.	
9	Beef	6536lbs.
1	Pork	1960lbs.
1	Fish	168lbs.
6	Rabbits	747
1	Hare	2
1	Partridges	4
No. of Prosecutions...	...	1
„ Convictions	...	1
Amount of Fine	£10	0 0
„ Costs	£2	8 0



The undermentioned were destroyed at Miry Lane Depôt, where they had been taken by the tradesmen of the town, after being inspected and declared unfit for food :—

				Tons.	Cwts.	Qrs.
Flat and Shell Fish	...	...		9	7	3
Sundries	...	...	...	25	12	2
Rabbits	...	...	...	...		874

#### CANAL BOATS ACTS, 1877-1884.

The carrying out of the above Acts has been favourably reported on by Mr. Brydone, Her Majesty's Inspector. In no instance had I any occasion to prosecute, though I have frequently had to caution some of the boatmen on account of their boats not being kept as clean as they might be. I have never had to caution any one twice, which speaks volumes with regard to their common sense.

No of Canal Boats Registered at Wigan	...	...	150
„ Applications for Registration	...	...	9
„ „ Granted	...	...	9
„ Inspections	...	...	207
„ Notices Issued	...	...	1
„ „ Complied with	...	...	1
„ Boats Re-registered...	...	...	3

#### INFECTIOUS DISEASE (PREVENTION) ACT, 1890.

Owing to the great number of cases of Infectious Disease notified, the work of disinfection has been very heavy indeed during the past year.

No. of Houses Disinfected...	...	...	708
„ Rooms	...	...	1109
„ Beds	...	...	520
„ Mattresses	...	...	169
„ Sheets and Quilts	...	...	1675
„ Articles of Clothing	...	...	1608
„ Houses Cleansed and Limewashed...	...	...	592
„ Visits to Houses, <i>re</i> Cleaning and Lime-			
washing	...	...	1850
„ Visits to Houses <i>re</i> Infectious Disease	...	...	2310

#### SALE OF FOOD AND DRUGS ACTS, 1877 AND 1879. MARGARINE ACT, 1887.

No. of Samples obtained	...	...	30
„ genuine	...	...	26
„ Adulterated	...	...	4
Milk	...	...	8
Butter	...	...	17
Margarine	...	...	1
Lard	...	...	2
Tea	...	...	2
Prosecutions	...	...	8
Convictions	...	...	6
Dismissed	...	...	2
Amount of Fines	...	...	£40 15 0
„ Costs	...	...	£13 4 6

## SLAUGHTER-HOUSES.

No. on Register.					
1	Behind 8, Darlington Street	...	...	...	W. Moore
2	Behind 60, Darlington Street	...	...	...	J. H. Green
4	Watmough's Yard, Scholes...	...	...	...	W. McAvoy
6	Upper Morris Street	...	...	...	W. Walsh
7	Rigby's Buildings, Scholes	...	...	...	H. Smith
8	Behind 124, Scholes	...	...	...	J. Watts
11	Wiend	...	...	...	H. Sawbridge
12	Water Street	...	...	...	J. H. & W. Cordeaux
14	Behind 75, Wigan Lane	...	...	...	J. Jackson
18	Bottom Croft	...	...	...	R. Johnson
19	Shaw's Yard, Hallgate	...	...	...	J. Smirk
24	Clayton Street	...	...	...	C. Sawbridge
28	Hilton's Yard, Scholes	...	...	...	J. Hilton
29	Mill Yard, Scholes	...	...	...	E. Hamill
30	Behind 53, Birkett Bank	...	...	...	W. Hasleden
32	Altham's Yard, Standishgate	...	...	...	L. Mynekyme
35	New Square	...	...	...	F. Knorzer
36	Silver Street...	...	...	...	E. McAvoy
39	Behind 133, Standishgate	...	...	...	J. Hill
41	Behind 122, Scholes	...	...	...	J. Lowe

## FELLMONGERS.

Millgate ... .. T. E. Dix.

## GUT SCRAPERS.

Shaw's Yard, Hallgate ... .. Christopher Eckman  
 Robin Hood Yard ... .. Carl Harder

## COMMON LODGING HOUSES.

No on Register.					Registered for.
5	1, 3, 5, Union Street...	...	...	...	50
6	16, Hardybutts	...	...	...	8
7	87, 89, 91, Millgate	...	...	...	44
8	1, Hardybutts	...	...	...	24
10	31, Scholes	...	...	...	15
13	1, Swift's Yard, Millgate	...	...	...	38
14	7, Hardybutts...	...	...	...	12
18	21, Rylance Row	...	...	...	9
19	22	...	...	...	7
24	28, Wiend	...	...	...	41
26	30, Hallgate	...	...	...	16
34	27	...	...	...	85
35	19, Warrington Lane...	..	...	...	29
37	7 and 9, Union Street	...	...	...	52
38	36 and 38, Hardybutts	...	...	...	88
39	21	...	...	...	17
40	5, 7, 9, Scholes	...	...	...	37



In conclusion, gentlemen, I must thank you for the prompt support that has been accorded the department by the Committee at all times. I must also tender my thanks to the members of my staff, Mr. Short and Mr. France, for the zeal they have shown in the execution of their work during the past year.

I remain, Gentlemen,

Your obedient Servant,

**JOHN SUMNER,**

Assoc. San. Inst.,

Chief Sanitary Inspector.